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WESTERN NAVAL TASK FORCE

OPERATION PLAN NO. 7 - 43

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WESTERN NAVAL TASK FORCE
U.S.S. ANCON, Flagship.

ALGIERS, ALGERIA,
August 14, 1943, (1030)

OPERATION PLAN
No. 7-43

TASK ORGANIZATION

(a) 80 CONTROL Force

80.1 Force Flagship

ANCON (FF).

NICHOLSON (RF),

H. M. S. ULSTER QUEEN.

80.2 Picket Group, Lieutenant Commander Barnes, U.S.N.
MTBron Fifteen (16 PT).

80.4 Diversion Group, Captain Andrews, U.S.N.

10 - ARBs,

KNIGHT (1 DD),

6 ML,

8 LCI(L),

4 SC,

SOEMBA, FLORES (2 Dutch Gunboats).

1 PT

4 MTB

80.5 Minelaying Group, Commander Mentz, U.S.N.

KEOKUK, SALEM, WEEHAWKEN,

OAKLEY

BLENCATHRA, TYNEDALE, HAMBLEDON (3 DDs HUNT Class).

(b) 81. SOUTHERN Attack Force, Rear Admiral Hall, U.S.N.

Transdiv Five (4 APA - 2 AKA),

Transdiv Three (5 APA - 2 AKA),

S.S. ORONTES, MARNIX VAN ST. ALDEGONDE, DUCHESS of BEDFORD (3 LSI(L)),

PHILADELPHIA, SAVANNAH, BOISE (3 CL),

H. M. S. ABERCROMBIE (1 Monitor),

Comdesron Eight, Desdiv Sixteen less MAYRANT (4 DD),

Comdesron Seven, Desdiv Thirteen plus PLUNKETT (5 DD),

Desdiv Twenty-five less BUCK (4 DD),

DALLAS, BERNADOU, COLE (3 ODD),

SEER, SKILL, SPEED, STRIVE, STEADY, SUSTAIN (8 AM),

12 YMS,

8 PC,

H. M. S. BOXER, BRUISER, THRUSTER (3 LST),

H. M. S. SHAKESPEARE (SS),

H. M. S. DERWENTDALE (1 LSG),

H. M. S. EMPIRE CHARMAN (1 LSC),

HOPI, MORENO (2AT),

Sixth Corps, U.S. Army - Major General Dawley.

25 LST

32 LCI (1)

6 LCT

PREVAIL + PILOT (1 AM)

HMS COLOMBO (1 CL)

(c) 85. NORTHERN Attack Force, Commodore Oliver, R.N.

H. M. S. HILARY (F),

BISCAYNE,

H. M. S. GLENGYLE, SOBIESKI, DEVONSHIRE (3 LSI(L)),

H. M. S. ROYAL ULSTERMAN, QUEEN EMMA, PRINCESS BEATRIX,

ULSTER MONARCH (4 LSI(M)),

H. M. S. PRINCE ALBERT, PRINCE CHARLES, PRINCE LEOPOLD, PRIN-

CESS CHARLOTTE, PRINCESS ASTRID (5 LSI(S)),

H. M. S. MAURITIUS, UGANDA, ORION (3 CL),

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BIGOT-AVALANCHE

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~~SECRET~~

DELHI (1 CL)
ALYN BANK (1 AA)
ROYAL SCOTSMAN (1 LSI (M))
BEAUFORT (1 DD)
EXMOOR (1 DD)
PINTOS (1 DD)
LED BURY
4 BYMS

15 & Fleet Mine Sweepers,
H. M. S. SERAPH, SPORTSMAN (2 SS),

23 22 SC,
NARRAGANSETT, NAUSET (2 AT),
8 PC,
45 LST (British), ~~THREE FOUR~~
LST Group ONE, ~~TWO, FIVE~~, SIX (45 LST),
60 LCT (British),
LCT Group TWENTY-FIVE, TWENTY-SIX (24 LCT),
48 LCI(L) (British),
LCI(L) Flotilla ONE, TWO (48 LCI(L)), ~~McCREERY~~
10th Corps (British) - Lieutenant General ~~Horrocks~~,

(d) 88. SUPPORT Carrier Force (Force "V"), Rear Admiral Vian, R.N.
H. M. S. UNICORN (1 CV),
H. M. S. HUNTER, BATTLER, ATTACKER, STALKER (4 ACVs),
H. M. S. EURYALUS, SIRIUS, DIDO (3 CL),
10 DDs.

H. M. S. SCYLLA (1 CL)
H. M. S. CHARYBIS (1 CL)
O. R. P. SPAZIK
O. R. P. KRAMOWIAK
H. M. S. CLEVELAND
H. M. S. HOLCOMBE
H. M. S. ALBERSTONE
H. M. S. LADDLESIDE
H. M. S. FIRNDALE
H. M. S. PUCKERIDGE
H. M. S. CALPE
H. M. S. HAYDON
(10 DD)

ile forces and on characteristics of the
nnex "A". Additional information as
ted.

ask Force is bounded:
om CAPE CIRCEO, Latitude forty-one
Longitude thirteen degrees zero zero
degrees thirty minutes North, Longi-
es East.

om Latitude forty degrees thirty min-
utes thirty minutes East, to Latitude
es North, Longitude fourteen degrees

ty-nine degrees thirty minutes North.

(d) On the Northeast by the coast.

(3) Enemy ports after capture will be operated by the British for joint
United States - British use.

(4) British submarines are assigned to Task Forces for duty as beacons.

(5) Aircraft anti-submarine protection for the Western Naval Task Force
and the waters through and in which it operates will be provided by the
Northwest African Coastal Air Force. Fighter protection for the Western
Naval Task Force will be provided by the Northwest African Coastal Air
Force until naval forces arrive North of SICILY, and thereafter by the
Northwest African Tactical Air Force. Day and night fighter cover will be
provided the Attack Forces, landing beaches, and ships lying offshore.
(See Air Plan, Annex "F").

(6) For markings of friendly aircraft, control of anti-aircraft fire, air-
craft identification procedure, method of requesting aircraft assistance
see Air Plan, Annex "F", and MEDITERRANEAN Joint Air Orders.

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~~PICTURE ATTACHED~~

OPERATION PLAN

No. 7-43

(7) A strong British force will cover the Allied assault from enemy heavy surface vessel attack.

(8) During moonlight on D minus one day own paratroops will be dropped in the vicinity of S. VALENTINO from transport planes in order to seize and secure the passes between the SALERNO and NAPLES plains.

Assumptions. (1) That Italian resistance will be stronger than that encountered in Operation HUSKY.

(2) That operations on the Russian Front will prevent withdrawal of German forces from that sector.

(3) That strong submarine, destroyer, E-boat and air attacks are to be expected.

(4) That mines may be encountered.

(5) That initial landings will be made over beaches during darkness.

(6) That weather conditions will permit landing through surf on the designated beaches.

(7) That false beaches will not preclude the landing ships and craft from landing on the true beaches.

(8) That the maintenance and build-up of military forces can be continued over beaches until the Ports of SALERNO and NAPLES become available and are rendered useable to meet logistic requirements.

2. This force will firmly establish the Fifth Army (Lieutenant General Clark, U.S.A.) in positions ashore in the GULF OF SALERNO and will support its advance to capture NAPLES and adjacent airfields, in order to occupy a firm base for future offensive operations.

3. (a) CONTROL Force. Force Flagship operate with SOUTHERN Attack Force, unless otherwise directed by Commander Western Naval Task Force.

Picket Group screen the Attack Forces against hostile surface forces approaching from bases Northwest of the attack area. Frustate enemy E-boat raids. Operate in accordance with Screening Directive, Annex "K". Diversion Group conduct raiding operations in accordance with Divers-
ion Directive, Annex "L".

Minelaying Group lay mines in accordance with Minelaying Directive, Annex "M".

(b) SOUTHERN Attack Force establish assigned Army forces ashore on selected beaches in the GULF OF SALERNO South of FIUME SELE at H hour on D day, in accordance with plan of attack developed by the Commanding General concerned. Support military operations by naval gunfire in accordance with Fire Support Plan, Annex "B". Silence batteries and destroy searchlights which threaten transports, beaches and landing craft. Move transports inshore during darkness and in daylight when shore batteries have been silenced. Expedite unloading ships and craft. The area assigned the SOUTHERN Attack Force is South of a line bearing two four five degrees true from the mouth of the FIUME SELE.

(c) NORTHERN Attack Force establish assigned Army forces ashore on selected beaches in the GULF OF SALERNO, North of FIUME SELE at H hour on D day, in accordance with the plan of attack developed by the Commanding General concerned. Support military operations by naval gunfire in accordance with Fire Support Plan, Annex "B". Silence batteries and destroy searchlights which threaten transports, beaches and landing craft.

OPERATION PLAN

No. 7-43

Expedite unloading ships and craft. When unloaded from assault flight release ~~forty eight~~^{SIXTY PERCENT OF OPERATIVE} LCT's to SOUTHERN Attack Force. Open the Port of SALERNO. The area assigned the NORTHERN Attack Force is North of a line bearing two four five degrees true from the mouth of FIUME SELE.

(d) SUPPORT Carrier Force supply maximum practicable fighter protection to Western Naval Task Force. Be prepared to transfer aircraft to captured airfields. Operate generally in area as assigned in and in accordance with detailed Air Plan Annex "F".

(x) (1) This Operation Plan will be placed in effect by despatch or sealed orders.

(2) D day and H hour will be signalled.

(3) Sail and rendezvous in accordance with Departure and Rendezvous Plan, Annex "G".

(4) The assault is to be pressed home with relentless vigor regardless of loss or difficulty.

(5) Take every available measure to ensure

(a) earliest warning of submarine attack, and
(b) destruction of hostile submarines.

(6) Destroy enemy forces encountered.

(7) Make adequate provision for probable existence of mine fields in the approach area within the one hundred fathom curve.

(8) Escort submarines from assault area in accordance with Submarine Escort Plan, Annex "H".

(9) Conduct approach in accordance with Approach Plan, Annex "J".

(10) Employ smoke to fullest extent for defense against enemy action and to screen own operations.

(11) Take special precautions to avoid firing on friendly aircraft.

(12) Take special precautions to avoid compromise of secret material and documents.

(13) Avoid congestion of stores and boats on beaches. Augment normal Shore Regiment organization to provide prompt unloading of boats at beaches. Provide sufficient troops to insure continuous cargo handling in holds of ships and in ships boats.

(14) Provide for effective boat salvage.

(15) Return landing ships and craft promptly in order to ensure prompt follow-up. Provide adequate escorts. Route shipping in accordance with Convoy Plan, Annex "I".

(16) Maintain radio silence and visual silence except as modified by Communication Plan, Annex "C".

(17) The following documents, in the possession of Commanders of Attack Forces, are in effect:

(a) MEDITERRANEAN Joint Air Orders.

(b) MEDITERRANEAN Convoy Instructions.

(c) MEDITERRANEAN Secret General Orders.

(d) MEDITERRANEAN War Communication Orders.

(18) Use TBS sparingly.

(19) Base on BIZERTA-TUNIS-PALERMO-ORAN-ALGIERS.

4. Evacuation of wounded in accordance with Medical Plan, Annex "D".
Logistics support in accordance with Logistic Plan, Annex "E".

5. Use Communication Plan, Annex "C". Use Zone BAKER time.

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OPERATION PLAN
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Rendezvous: A. TRAPANI
B. PALERMO
C. Lat. 40° N., Long. 14° E.
D. Lat. 39° N., Long. 13° E.
E. SAI ERNO
F. NAPLES
G. ORAN
H. ARZEW
I. ALGIERS
J. BOUGIE
K. PHILIPPEVILLE
L. BONE
M. BIZERTA
N. TUNIS
O. SOUSSE
P. TRIPOLI
Q. LAMPEDUSA
R. PANTELLERIA
S. MALTA
T. SYRACUSE
U. AUGUSTA
V. GELA
W. LICATA
X. TENES

The short title of this plan is "AVON/W1"
Commander Western Naval Task Force in ANCON with SOUTHERN Attack Force.

H. K. Hewitt

H. K. HEWITT,
Vice Admiral, U.S. Navy,
Commander Western Naval Task Force.

ANNEXES:

- ✓ A. Information Annex.
- ✓ B. Fire Support Plan.
- ✓ C. Communication Plan.
- ✓ D. Medical Plan.
- ✓ E. Logistic Plan.
- ✓ F. Air Plan.
- ✓ G. Departure and Rendezvous Plan.
- ✓ H. Submarine Escort Plan.
- ✓ I. Convoy Plan.
- ✓ J. Approach Plan.
- ✓ K. Screening Directive.
- ✓ L. Diversion Directive.
- ✓ M. Minelaying Directive.
- ✓ N. Intelligence Annex.
- ✓ O. AIR BEACON DIRECTIVE

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OPERATION PLAN
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DISTRIBUTION:

CinCAF	5	No's. 1-5
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CTF 82	1	No. 45
CTF 83	1	No. 46
CTF 84	1	No. 47
CTF 85	5	No's. 48-52
CTF 87	2	No's. 53, 54
CTF 88	5	No's. 55-59
CTG 80.2	2	No's. 60, 61
CTG 80.4	2	No's. 62, 63
CTG 80.5	2	No's. 64, 65
ComLanCrabNAW	5	No's. 66-70
Joint Loading Control (Captain Zimmerli)	2	No's. 71, 72
CTG 89.1	2	No's. 73, 74
CO AATB Bizerte	1	No. 75
CO AATB Tunis	1	No. 76
CominCh	2	No's. 77, 78
Vice CNO	2	No's. 79, 80
ComNavEu	2	No's. 81, 82
CG 5th Army (US)	2	No's. 83, 84
CG 6th Corps (US)	2	No's. 85, 86
CG 34th Inf Div (US)	2	No's. 87, 88
CG 36th Inf Div (US)	2	No's. 89, 90
CG 1st Armd Div (US)	2	No's. 91, 92
CG 82nd Airborne Div (US)	2	No's. 93, 94
CG 10th Corps (British)	2	No's. 95, 96
CG 46th Inf Div (British)	2	No's. 97, 98
CG 56th Inf Div (British)	2	No's. 99, 100
CG 7th Armd Div (British)	2	No's. 101, 102
CG 1st Airborne Div (British)	2	No's. 103, 104
CG 15th Army Group	5	No's. 105-109
A CinCMed	5	No's. 110-114
CG NAAF	2	No's. 115, 116
CG NATCC	2	No's. 117, 118
AOC NACAF	2	No's. 119, 120
AOC NATAF	2	No's. 121, 122
CG NASAF	2	No's. 123, 124
CG NAASC	2	No's. 125, 126
CG 12th ASC	2	No's. 127, 128
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SOS NATOUSA	1	No. 130
Naval Staff WNTF	25	No's. 131-155
All Task Group and Task Unit		
Commanders and reserved for spares	745	No's. 156-900

Keenan
J. M. BOIT
Commander, U.S.N.R.
Flag Secretary

‡ 30 copies furnished CinCMed for distribution as deemed advisable.

COMMANDER U.S. NAVAL FORCES

NORTHWEST AFRICAN WATERS

ANNEX A - AVALANCHE

REVISED INDEX

CHARACTERISTICS OF THE THEATRE

General (2 pp.)

Light and dark periods for NAPLES (2 pp.)

Tide tables for NAPLES (2 pp.)

Appendix I to Annex A: Weather Summary (3 pp.)

Beach reports (1 sheet each for Beaches 25D, 26, 27, 28, 29, 30, 31, 32, 33, and 33A; Minor beaches on southern coast of SORRENTO peninsula, 3 pp.)

Ports

Map of harbor of NAPLES (red overprint as of 21 Aug 43); special distribution

Map of harbor of NAPLES and map of harbor of GAETA (same sheet) ..

Map of PORT SALERNO and plan of port of CASTELLAMMARE DI STABIA (same sheet)

Diseases and hygiene (4 pp.)

ENEMY STRENGTH

Ground forces (2 pp.)

Maps:
Axis garrison in S. ITALY, SARDINIA, and CORSICA (17 Aug 43) and Axis garrison GAETA-NAPLES-SALERNO area (18 Aug 43)*, on same sheet

Sea forces (3 pp.)

Air forces (6 pp.)

Appendix 1: Aircraft recognition, allied and enemy aircraft (1 sheet)

Appendix 2 (4 pp. with attached map)

Appendix 3: Airdromes - ITALY - So. 43° N (1 sheet)

Mine-fields (1 page)

Radar (1 page)

SUPPLEMENT NO. 1 of 26 Aug 43 (2 pp.)

*Later maps showing Axis garrison in ITALY, SARDINIA, and CORSICA will be issued as information is received.

GRAPHIC PRESENTATIONS (Separately distributed)

Index map of coast defense batteries GAETA-NAPLES-SALERNO area dated 21 Aug 43 (includes information in Special Interpretation Reports through No. AV/19)

CD Battery Sketches*

S-855975, N 849008, and N 862002 on same sheet

N 784130 and N 707254 on same sheet

N 695276 and N 661311 on same sheet

N 615298 and N 195175 on same sheet

M 934330 and N 157432 on same sheet

N 027574 and N 009405 on same sheet

N 259475 and N 143493 on same sheet

M 935386 and M 888394 on same sheet

N 334433 and M 985655 on same sheet

M 962693, M 954693, and M 937717 on same sheet

Collation Maps - defenses overprinted (20 sheets at scale 1/25,000; 9 sheets at scale 1/50,000). These maps include information in Special Interpretation Reports through No. AV/14 and part of AV/15

Topographical Maps (appropriate sheets of G.S.G.S. 4228, 1/25,000; G.S.G.S. 4229, 1/50,000; G.S.G.S. 4164, 1/100,000; and G.S.G.S. 4230, 1/250,000)

Town plans (G.S.G.S. 4380, Town plan of NAPLES, and G.S.G.S. No. (Misc.) 46, AMALFI-RAVELLO)

Gridded charts# (F.0645, F.0646, F.0650, F.0651, F.0652, F.0653, F.0654, F.0655, F.0839)

Chartlet No. 101 and Chartlet No. 102 (of assault area)

Beach Sketches - defenses overprinted (4 sketches covering Beaches 31, 32, 33, and 33A); to Southern Attack Force only

Beach Diagrams, scale 1/15,000 (Nos. 201, 202, and 203 of Northern Attack Force area; Nos. 204 and 205 of Southern Attack Force area)

*Other battery sketches will be issued at a later date.

#This list revises that given in Annex B, Gunfire Support Plan.

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COMMANDER U.S. NAVAL FORCES

NORTHWEST AFRICAN WATERS

ANNEX A - AVALANCHE

CHARACTERISTICS OF THEATRE

1. GENERAL. In order to make the necessary information for planning available as early as practicable and because lack of time does not permit inclusion of more than essential information for conduct of the operation, ANNEX A, has been printed and distributed in sections with references, insofar as practicable, to publications and maps of general distribution.

2. Information available to the date of printing, - hydrographic, topographic defense installations and enemy strength - has been included on an overprint to the GSGS series maps which are being distributed in sufficient quantity to be available to all ships and major landing craft.

3. Beach diagrams, panoramic beach sketches and large scale chartlets should be consulted for detailed information on the assault areas. All commanders of groups should ensure that these graphic presentations are distributed to all boat wave commanders and boat officers, as well as the officers in beach parties and commanding officers of landing craft and close support craft.

4. Experience in the Sicily landings emphasized the importance of provision by assault commanders for an early and thorough reconnaissance of the beaches with adequate marking of dangerous bars and of local channels or gaps, in the bars permitting better beaching of craft and greatly increased speed of unloading.

5. PHYSICAL FEATURES. The west coast area of ITALY from GAETA (PUNTA STENDARDO) to PUNTA LICOSA is mountainous with narrow valleys not particularly suited to military operations. The coast within this area is marked by large bays or gulfs, separated by rocky headlands or promontories, with the shoreline an alternation of rugged coast separated by low, sandy shores along the inner margins of the gulfs. Starting at the north, the headland at GAETA is rocky with small pocket beaches, but as the coast swings to the east and southeast around GOLFO DI GAETA the shore becomes low and sandy as far as the headland at PUNTA DI FUMO, with its off-lying islands of PROCIDA and ISCHIA. Around the point, the shore swings abruptly north and east into GOLFO DI POZZUOLI, a small inner bay within the larger GOLFI DI NAPOLI. The shores of GOLFO DI NAPOLI are generally rocky except at the port of NAPOLI (NAPLES) and south of TORRE ANNUNZIATTA. The northeast shore of the gulf is dominated by MOUNT VESUVIUS, an active volcano. The southern shore of GOLFO DI NAPOLI is the rocky promontory of SORRENTO, which trends to the southwest and terminates in PUNTA CAMPANELLA. ISOLA CAPRI lies a few miles off this point. The southern shore of the SORRENTO peninsula trends east-northeast to SALERNO and is generally rocky but pocket beaches, sometimes isolated, are scattered along its length. The most important places for small scale landings are at POSITANO, AMALFI, MINORI, and MAIORI. Southeast of SALERNO the shore is low and sandy nearly to AGROPOLI. The SALERNO-AGROPOLI coast is described in detail in the Beach Section of this Annex. From AGROPOLI the coast trends southwest and southeast around PUNTA LICOSA; it is generally steep and rocky, but beaches occur near PILINURO.

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6. HYDROGRAPHY. The off-shore approach to GOLFO DI GAETA is obstructed by the ISOLE PONTINE, an archipelago of small islands in two groups. The northwestern group is composed of three small islands plus associated rocks and reefs, and the southeastern group contains two islands. The ISOLE PONTINE are about thirty miles south-southwest of GAETA. The islands of PROCIDA, ISCHIA and CAPRI guard the entrance to GOLFO DI NAPOLI, lying close to the headlands on either side of the gulf. Except for these islands and numerous rocks and shoals close to them and to the rocky headlands, the approach to the mainland is clear, with the 30 ft. contour seldom more than 1/4 mile offshore. The character of the offshore bottom varies, being sandy or muddy.

7. Tides. Tides along this coast are generally negligible. At NAPLES, which is typical, the mean range of tide is 1.1 foot and the spring range 1.4 ft. Strong southerly winds may cause a rise of water level of 1 ft. and strong northerly winds a corresponding decrease. The phase of tide is practically simultaneous along the entire coast under consideration, with high water occurring about 3 hours after meridional passage of the moon.

8. Currents. There is some conflict in literature about currents in the TYRRHENIAN SEA. The correct general situation is believed to be that the main MEDITERRANEAN current moving east from GIBRALTAR swings into the TYRRHENIAN SEA between SARDINIA and SICILY and forms a giant eddy, with the main stream swinging northwestward along the ITALIAN Coast.

9. The general picture of the currents in the TYRRHENIAN SEA is partly complicated by the influence of the winds on the currents. Most of the currents are weak, and they are greatly influenced by the wind; when the wind is strong and continuous from any one quarter the normal current direction may be reversed. Currents will generally be strongest with a southwest wind, the main stream being up the coast and a weak counter-current likely in the gulfs.

10. Waves and Surf. The prevailing northwesterly winds over the TYRRHENIAN SEA give rise to waves moving to the southeast, but the trend of the Italian shore is approximately in this same direction, so that these waves appear to be effective only on headlands and promontories. By far the greatest fetch for waves is to the southwest between SICILY and SARDINIA, and storms originating in the southern part of the MEDITERRANEAN travel northeast past the southern tip of SARDINIA, creating swells which are felt all along the Italian coast. Except for these swells from the southwest the waves are relatively small. Statistics indicate that in GOLFO DI NAPOLI - which is typical of the gulfs to north and south of it - 300 days out of the year waves were less than 20 inches. Only six days out of the year did they exceed three feet. The highest waves occur mainly in the months of April and November. The most probable height of waves for GOLFO DI SALERNO and GOLFO DI GAETA is one to two feet. Surf is generally light as the result of gentle wave action. However, along beaches with a relatively steep bottom close offshore, heavy surf may be expected when moderate waves are running.

COMMANDER U. S. NAVAL FORCES

NORTHWEST AFRICAN WATERS

ANNEX A - AVALANCHE

CHARACTERISTICS OF THEATRE

LIGHT AND DARK PERIODS FOR NAPLES
 (Lat 40.52 N, Long 14-16 E)
 For September and October, 1943
 All Times GCT

Date	Morning Twilight		Evening Twilight		Phase of Moon		
	Begins	Sunrise	Sunset	Ends	Moonrise	Moonset	Moon
Sept 1	0250	0428	1737	1914	0547	1840	
2	0251	0429	1736	1912	0647	1908	
3	0253	0430	1734	1910	0746	1957	
4	0254	0431	1732	1908	0848	2008	
5	0255	0432	1731	1906	0950	2042	
6	0256	0433	1729	1904	1053	2120	
7	0258	0434	1728	1903	1158	2234	First Quarter
8	0259	0435	1726	1901	1301	2257	
9	0300	0436	1724	1859	1402	2357	
10	0302	0437	1723	1857	1458	---	
11	0303	0438	1721	1855	1547	0103	
12	0304	0439	1720	1853	1632	0215	
13	0305	0440	1718	1851	1711	0329	
14	0307	0441	1716	1849	1748	0443	Full Moon
15	0308	0442	1714	1847	1823	0555	
16	0309	0443	1712	1845	1856	0706	
17	0311	0445	1710	1843	1930	0814	
18	0312	0446	1709	1841	2006	0920	
19	0313	0447	1707	1839	2044	1023	
20	0314	0447	1705	1837	2126	1123	
21	0316	0448	1704	1835	2211	1218	Last Quarter
22	0317	0449	1702	1833	2300	1308	
23	0318	0450	1700	1832	2352	1353	
24	0319	0451	1659	1830	---	1433	
25	0320	0452	1657	1828	0048	1510	
26	0322	0453	1655	1826	0144	1544	
27	0323	0454	1654	1824	0242	1614	
28	0324	0455	1652	1822	0340	1643	
29	0325	0456	1651	1820	0439	1711	New Moon
30	0326	0457	1649	1819	0539	1740	
Oct. 1	0327	0458	1647	1817	0641	1811	
2	0328	0459	1646	1816	0743	1843	
3	0329	0500	1644	1814	0847	1920	
4	0330	0501	1642	1812	0951	2002	
5	0331	0502	1640	1811	1054	2051	

Date	Morning Twilight		Evening Twilight		Phase of Moon		
	Begins	Sunrise	Sunset	Ends	Moonrise	Moonset	
Oct 6	0332	0504	1638	1809	1156	2147	First Quarter
7	0333	0505	1637	1808	1251	2249	
8	0334	0506	1636	1806	1342	2357	
9	0335	0507	1635	1804	1425	—	
10	0336	0508	1634	1803	1506	0108	
11	0337	0509	1630	1801	1543	0220	
12	0338	0510	1629	1800	1617	0332	
13	0339	0511	1627	1758	1651	0442	Full Moon
14	0340	0512	1626	1756	1725	0553	
15	0341	0513	1624	1755	1800	0701	
16	0342	0514	1623	1753	1837	0806	
17	0343	0515	1621	1752	1918	0909	
18	0344	0516	1620	1750	2003	1008	
19	0345	0517	1618	1749	2051	1101	
20	0346	0518	1617	1747	2143	1149	
21	0347	0519	1615	1746	2237	1238	Last Quarter
22	0348	0520	1614	1745	2333	1330	
23	0349	0521	1613	1744	—	1344	
24	0350	0522	1611	1742	0030	1415	
25	0351	0523	1609	1741	0129	1444	
26	0352	0525	1608	1740	0227	1512	
27	0353	0527	1606	1738	0328	1542	
28	0354	0528	1605	1737	0430	1611	
29	0355	0529	1604	1736	0532	1643	New Moon
30	0356	0531	1603	1735	0638	1719	
31	0357	0532	1601	1734	0743	1759	

17 Aug 43

TIDE TABLES FOR NAPLES
(Lat 40-52 N, 14-16 E)
For September and October, 1943

Mean Range of Tide 1.1 Feet
Spring Range of Tide 1.4 Feet
Height of High Tides from 1.1 to 1.6 Feet.
Height of Low Tides from 0.1 to 0.2 Feet.
All Times GCT

Date	High	Low	Date	High	Low
Sept. 1	0842	0206	Sept. 18	1031	0351
Wed.	2100	1426	Sat.	2258	1616
2	0916	0238	19	1115	0431
Thur.	2134	1500	Sun.	2348	1656
3	0950	0314	20	--	0515
Fri.	2211	1538	Mon.	1208	1744
4	1027	0351	Tue.	0052	0608
Sat.	2252	1618	21	1316	1843
5	1111	0434	22	0209	0718
Sun.	2346	1705	Wed.	1438	2011
6	--	0525	23	0330	0912
Mon.	1207	1800	Thu.	1555	2203
7	0052	0623	24	0435	1050
Tues.	1322	1908	Fri.	1655	2309
8	0215	0737	25	0525	1135
Wed.	1446	2032	Sat.	1741	2345
9	0334	0903	26	0602	--
Thu.	1605	2155	Sun.	1620	1206
10	0440	1028	27	0638	0015
Fri.	1705	2305	Mon.	1855	1230
11	0536	1132	Tue	0710	0041
Sat.	1756	2358	28	1928	1300
12	0623	--	Wed	0740	0111
Sun.	1845	1223	29	2001	1330
13	0706	0042	Thu	0815	0141
Mon.	1928	1305	30	2035	1401
14	0748	0123	Oct	0847	0214
Tue	2010	1345	Fri	2110	1439
15	0829	0200	Sat	0923	0250
Wed	2050	1422	2	2146	1513
16	0909	0238	Sun	1000	0326
Thu	2130	1500	3	2230	1554
17	0948	0316	Mon	1046	0412
Fri	2215	1537	4	2320	1639

Date	High	Low	Date	High	Low
Oct. 5	1143	0500	22	0247	0822
Tue	—	1733	Fri	1516	2049
Wed	0626 1255	0600 1840	Sat	0355 1622	1000 2210
Thu	0146 1420	0720 2006	24	0146 1710	1055 2300
Fri	0308 1540	0850 2132	Mon	0528 1750	1129 2334
Sat	0416 1645	1012 2243	Tue	0605 1826	— 1200
Sun	0511 1740	1118 2336	Wed	0638 1901	0009 1230
Mon	0600 1826	— 1206	Thu	0714 1937	0040 1303
Tue	0645 1910	0024 1246	Fri	0747 2012	0115 1338
Wed	0726 1950	0104 1326	Sat	0824 2049	0151 1415
Thu	0806 2030	0140 1403	Sun	0901 2129	0230 1454
Fri	0846 2110	0217 1437			
Sat	0923 2150	0251 1512			
Sun	1005 2231	0327 1548			
Mon	1044 2320	0402 1626			
Tue	1133 —	0443 1709			
Wed	0016 1237	0533 1800			
Thu	0130 1355	0639 1915			

ANNEX A - AVALANCHE

GOLFO DI SALERNO

Beach 25 D: SALERNO
Location of center: $40^{\circ} 42' 00''$ N., $14^{\circ} 44' 40''$ E.
Coordinates: GS 4229 - 185 II 625305-631307
Length: 700 yds.
Width: 30 yds.

Sea approach is clear with principal landmarks MONTE PIANO, 1279 ft. high, located 600 yds. North of CAPO D'ORSO; the lighthouse on CAPO D'ORSO; and the mole of the harbor of SALERNO close to the west. The bottom is mud in deep water, changing to sand inshore generally within the 30 foot depth, which off SALERNO is about 650 yds. offshore.

In general the prevailing winds in this area are from the western quarter. However, at SALERNO in summer the land and sea breezes are prominent and sometimes rather fresh. Northerly winds blow down from the mountains in squalls.

Currents off SALERNO are weak and variable, in general following the shore from the southeast.

The beach is backed by a minor road and then a low cliff. There is a large bathing establishment on the beach which is flanked on the west by rugged cliffs and on the east by the mole of SALERNO HARBOR. The attached rows of bath houses occupy considerable space on the beach and the landward side of the road is lined with large buildings.

The gradient from charted 13 ft. depth is 1:25 about the center of the beach. No bars are apparent but there are submerged rocks flanking the beach on each side. Beach suitable for all types of craft including LST, best part being 400 yds. eastern portion.

EXITS: Suitable for personnel, vehicles and tanks but clearance limited to the one lateral road. This should be a good beach for assisting discharge into SALERNO.

DEFENSES: The beach itself is backed by an anti-tank ditch. No other defenses are reported in the immediate vicinity of the beach. The dual purpose battery at N 615298 at VIETRI SULMARE commands the approach to the beach from the west. At least one gun of the DP btry at N 661311, east of SALERNO, could probably fire on craft approaching this beach.

ANNEX A - AVALANCHE

BEACH REPORT

BEACH 26

SALERNO SOUTH

Location of center: $40^{\circ} 39' 48''$ N., $14^{\circ} 47' 30''$ E.
Coordinates: GSGS 4229, 185 II 655301; 197 I, 671291.
Length: 2100 yds.
Width: 20 yds.

Sea approach is clear. The terrain inland is mountainous. Near the northern end close to the shore is a conspicuous small hill. The area just inland of the beach is thickly built up - many buildings apparently industrial type. About 600 yds. inland on rising ground is a prominent collection barrack type buildings.

The beach is of rough firm sand backed by a disused railway embankment.

Gradient from charted depths 1:30 to 1:55. There is no evidence of a bar. The beach is suitable for all types of craft including LST's.

Exits for infantry anywhere off the beach over the old railway embankment. Vehicles and tanks off the southern end by a minor road which leads through PASTENA village 600 yds. inland. This road is also an exit for Beach 27.

Defenses: With the exception of one MG at the boundary between Beach 26 and Beach 27, there are no known beach defenses. The DP btry at N 615298 could engage craft approaching the beach. One or more guns of the DP btry at N 661311 could probably fire on craft off the beach.

ANNEX A - AVALANCHE

BEACH REPORT

BEACH 27

MERCATELLO

Location of center: $40^{\circ} 38' 32''$ N., $14^{\circ} 49' 20''$ E.
Coordinates: GS63 4229, 197 I 671291 - 709251
Length: About 6000 yds.
Width: 20-140 yds.

Sea approach clear. The 2 fathom contour is 150-200 yds. off shore. The southern 2/3 of the beach shows evidence of a very irregular sand bar well inside the 2 fathom curve. It is not estimated that this bar will be a serious obstacle to landing.

Gradient (from charted depths) 1:35 to 1:65. The portion of the beach on the waterline is apparently firm sand with rough surface; further inland the sand is soft.

Exits suitable for personnel, vehicles and tanks. The best exit is at the bathing establishment at the northern end where there is access to ROUTE 18, although there is a low sea wall there. A narrow road, becoming a track at the south end, runs along the landward edge of the beach and a number of tracks run down to it from the network of narrow roads inland. There is a level crossing over the railway at S. LEONARDO (7027) which connects this network of narrow roads with Route 18. Another prepared exit exists at the northern extremity of the beach, but this is also the best exit for BEACH 26.

This is considered a good beach for maintenance, suitable for all types of craft including LST's, after reconnaissance for selection of best beaching points which will probably be on northern portion fronting the bathing establishment.

Defenses: About 9 MG's are situated on the beach, most of them on the southern half. The DP btry at N 695276 is located behind the center of the beach and that at N 707254 is on the beach at the southern end, near the PICENTINO R. Both of these batteries are surrounded by wire and are locally defended by MG's.

RICOT

N-2, ComNavNav

HOVAT

ANNEX A - AVALANCHE

BEACH REPORT

BEACH 28

MAGAZZINO

Location of center: $40^{\circ} 36' 15''$ N., $14^{\circ} 51' 48''$ E.
Coordinates: GSGS 4229, 197 I; 709251 - 745203.
Length: 6700 yds.
Width: 50 - 100 yds.

Sea approach clear. The 2 fathom contour is 150 - 175 yds. off-shore. A very irregular cusp-shaped bar lies well within the 2 fathom curve and is not believed to constitute a serious obstacle to landing.

The hinterland is flat but the south end of the beach can probably be identified by the tower of the large building at N 755220. There are tree clumps and orchards back of the north half which may be conspicuous.

The beach is of firm sand rough surface near the waterline becoming soft back from the water line where the beach is wider. The beach is backed by cultivated land part of which is reclaimed land with drainage canals.

Gradient is estimated from charted soundings to be 1:50 to 1:70 except at south end where it is charted as 1:87.

The beach is suitable for landing boats anywhere. It is believed that LCI and LCT can drive over the bar anywhere and that reconnaissance on the spot will find numerous places where LSTs can beach.

EXITS are suitable for personnel, vehicles and tanks. From FIUME ASA south a good road skirts the edge of the beach forming part of the network of roads over the reclaimed land. North of FIUME ASA only a track skirts the beach but from it leads roads joining the STRADA STATALE. All the roads from the beach lead directly or indirectly into ROUTE 18.

This should be a good beach for maintenance.

DEFENSES: There are MGs and pill-boxes along almost the entire length of the beach, with a strong-point at either end. There are no defenses in depth except those of the MONTE CORVINO airfield located about 5 kilometers inland from the center of the beach. The 4 gun dual purpose batteries at N 695276 and N 707254 could fire on craft approaching beach 28.

ANNEX A - AVALANCHE

BEACH REPORT

BEACH 29

FASANARELLA

Location of center: $40^{\circ} 33' 55''$ N., $14^{\circ} 54' 00''$ E.
Coordinates: GSGS 4229 - 197 I; 746202 - 766168,
Length: 4200 yds.
Width: 30 - 50 yds.

Sea approach clear. 2 fathom contour 375 yds. offshore northern portion of beach decreasing gradually to 200 yds. at southern end. Anchorage offshore possible as the 30 fathom curve is $3\frac{1}{2}$ miles offshore. The beach is difficult to locate though there are some prominent buildings near the northern end.

The beach is principally of soft sand backed by reclaimed low dunes and cultivated reclaimed land to the north. Backing the southern half of the beach there are low dunes with scattered scrub vegetation and extensive marshy land inland.

Gradient from charted soundings estimated 1:65 to 1:90. The southern half of the beach has an irregular cusped bar well inside the 2 fathom curve but this bar is not believed to constitute a serious obstacle to landing.

The beach is believed suitable for landing boats anywhere; for LCI and LCT with perhaps some forcing over the bar and for LSTs in most places after reconnaissance on the spot.

EXITS: A track skirts the edge of the beach. There is a good exit at each end of the beach and three minor roads leading straight inland from the north central portion of the beach. All these connect with ROUTE 18.

The northern portion of the beach should be suitable for maintenance.

DEFENSES: There are a few MGs along the beach, with one strong-point near the northern end. There are no known defenses in depth. The 4 gun dual purpose batteries at N 695276 and N 707254 could probably fire on craft approaching the beach. Due to its siting, it is doubtful if the coast defense battery at N 784130, with the possible exception of its northernmost gun, could fire on boats approaching beach 29.

ANNEX A - AVALANCHE

BEACH REPORT

BEACH 30

CAMPOLUNGO

Location of center: $40^{\circ} 31' 06''$ N., $14^{\circ} 55' 45''$ E.
Coordinates: GSGS 4229, (197 I, 768163 - 198 III 793098).
Length: 7500 yds.
Width: 35-65 yds. northern half.
20-40 yds. southern half.
(This width does not include scrub land back of beach)

Sea approach clear. 2 fathom curve 200-350 yds. offshore. This is a flat featureless coast with few landmarks though there is a building with a tower or "fat chimney" at N 783132 which will probably show up well. each charted at N 783143 is probably not conspicuous.

Anchorage is practicable off the beach, the 30 fathom curve being about 4 miles offshore.

The beach is of sand backed by a wide belt of scrub and low-lying reclaimed land probably marshy in places. There are lagoons at the mouth of FIUME SELE and at the northern end of the beach.

Gradient is estimated from charted depths at 1:50 to 1:90 except near southern end where it is charted 1:110. An irregular bar extends in many places to the two fathom curve. Inside this the bottom is very uneven and probably subject to change. The innermost bars appear to be 50-120 yds. offshore.

Beach is considered suitable for landing boats anywhere; for LCT and LCI with perhaps difficulty at some spots, and for LST's in some places after reconnaissance. Pontoon causeways may be necessary for LST's.

EXITS: Suitable for personnel and possible for vehicles and tanks. A track and a drainage ditch skirt the edge of the low dunes. There are many drainage ditches inland which will hinder movement off roads.

This beach does not appear desirable for maintenance.

DEFENSES: There is only one MG at the northern end of the beach. There are several at the southern end, with a circle of wire near the mouth of the SELE R. In the center, on the beach at N 784130, is a 4 gun coast defense battery with many local defenses. There are no known defenses in depth behind the beach. The 4 gun dual purpose batteries at N 695276 and at N 707254 could probably fire on craft approaching beach 30. It is further possible that the railway battery at N 862002 could also cover the approaches to the beach.

ANNEX A - AVALANCHE

BEACH REPORT

BEACH 31

CASALE GRECO

Location of center: $40^{\circ} 26' 55''$ N., $14^{\circ} 58' 00''$ E.
Coordinates: GSCS 4229 - 193 III; 793092 - 834029
Length: 8000 yds.
Width: 20 - 75 yds. (wider at southern end)

Sea approach clear. This is a featureless coast though at the northern end of the beach TORRE DI KERNOT and nearby buildings on the southern bank of the mouth of FIUME SELE should stand out well. Anchorage is practicable off the beach, the 30 fathom curve lies 4 miles off-shore. The 2 fathom curve is 175 - 200 yards off-shore on the northern half of the beach and 250 - 325 yds. off-shore on the southern half. Bottom is sand.

The beach is sand backed by a belt of scrub covered sand 350 yds. wide at the north end and 200 yds. wide at the south end. There are lagoons in places. The hinterland is low-lying and marshy and is cut-up by a number of drainage canals and ditches.

Gradient from charted soundings and photographs is estimated to be 1:75 to 1:90. A double line of bars - very irregular - offlies the beach, the inner one being 80 - 100 yds. offshore. For the northern part of the beach the outer bar follows generally the 2 fathom curve. The inner bar is believed to have 4 - 8 ft over it with depths up to 10 ft. inside. The bottom inside the inner bar appears to be uneven and shifting.

The beach is considered suitable for landing boats; LCI and LCT can probably get ashore in many places and there may be places where LSTs can beach, though probably pontoons will be required.

EXITS are considered suitable for personnel and possible for vehicles and tanks. A metalled road runs along the back of the dunes from TORRE DI KERNOT and turns inland about 2000 yds. further south to ROUTE 18. There are two tracks from the beach near TORRE DI KERNOT which join this road and which could be developed for vehicles. A track skirts the dunes for the remainder of the beach with tracks joining from the beach and from a minor road parallel to the beach and about 550 yds. further inland. This minor road turns inland at the extreme southern end of the beach, crosses drainage canals and joins ROUTE 18. It is unlikely that the bridges across the drainage canals can carry heavy vehicles.

The beach is considered suitable for only limited maintenance.

Defenses: The beach is defended by two strong-points and several isolated MGs. There are apparently no defenses behind the beach. The DP battery at N 695276, the CD btry at N 784130, the ry btry at N 862002, the CD btry at N 849008 (if occupied), and the DP btry at N 855975 could all probably engage shipping approaching beach 31. The latter btry could probably fire on the beach as well.

ANNEX A - AVALANCHE

BEACH REPORTS

BEACH 32

PAESTUM (PESTO)

Location of center: $40^{\circ} 24' 10''$ N., $14^{\circ} 59' 36''$ E.
Coordinates: GSGS 4229, 198 III 834029 - 849984.
Length: 5100 yds.
Width: 20 - 65 yds.

Sea approach clear. Anchorage is practicable, the 30 fathom curve lying $\frac{4}{5}$ miles offshore. TORRE DI PAESTUM and the cliffs and the southern end of the beach should be identifiable as landmarks. The two fathom curve is about 275 yds. offshore at the northern end, closing in to 150-175 yds. in the central and southern portion. There are submerged rocks off the extreme south end.

The beach is sand backed by low lying scrub covered sand and marsh, broken by several streams all of which (except FIUME SOLO FRONE) form extensive lagoons at their mouths. Only the southern 1200 yds. of the beach is clear of lagoons. High land with railway and road at its foot is at the southern end of the beach.

Gradient is estimated at 1:30 to 1:45 from charted soundings. There is a bar 120-150 yds. offshore. Depths over the bar is probably more than 6 ft. The bottom inside the bar is very uneven. The beach is considered suitable for landing boats, LCTs and LCIs and probably for LSTs at places selected by reconnaissance.

Exits are suitable for personnel and fair for vehicles and tanks, except for the central 1500 yds. of the beach. The best exits for vehicles and tanks are close south of TORRE DI PAESTUM where two narrow roads lead down to the beach from the road network connecting with ROUTE 18. In the extreme southern part of the beach a track leads up from the beach and hugs the right bank of FIUME SOLO FRONE. At southern limit of the beach a good road and the railroad sweep close to the shore. The railway is on the seaward side of the road and a crossing over it must be made to gain access to the road.

This beach is suitable only for limited maintenance.

NOTE: This is not a good beach because of the dunes, lagoons, numerous streams and marshy hinterland.

Defenses: There are numerous MGs and casemates large enough for light guns. They are chiefly grouped in two areas, one near the northern, the other near the southern end. The railway battery at N 862002 is inland from the south-central end of the beach. The unoccupied CD btry at N 849008 is at about the center of the beach. There are few defenses in depth. There is a road block just S of the F. SOLOFRONE, where the road from AGROPOLI joins Route 18. The DP btry at N 855975 could probably fire on the beach as well as craft off the beach. The CD btry at N 784130 could also fire on shipping off beach 32.

APPENDIX A - AVALANCHE

BEACH REPORT

BEACH 33

AGROPOLI (NORTH)

Location of center: $40^{\circ} 21' 45''$ N., $15^{\circ} 00' 00''$ E.
Coordinates: GSGS 4229, 198 III, 847966 - 842952
Length: 1900 yds.
Width: 10-30 yds.

Sea approach clear. Anchorage is practicable off the beach. A recommended anchorage is charted 1300 yds. 342° from AGROPOLI castle, in 7 1/2 fathoms, bottom mud and weeds. The two fathom curve is 275-400 yds. offshore. The beach should be easy to locate with AGROPOLI castle the principal landmark. There are several weed patches close in along the beach.

The beach is sand backed by a narrow belt of waste land and cultivation behind which run the coastal road and railway, the road being on the seaward side of the railway. At southern end of the beach FIUME TESTENE runs into the sea forming lagoons at its mouth and for some distance along the beach. The hinterland is sparsely cultivated and possibly marshy, with rising background.

Gradient is estimated 1:60 to 1:90 from charted soundings. The bottom off the northern portion of the beach is very irregular. The beach is considered suitable for LCVP and LCM and for LCI and LCT in portions selected by reconnaissance. Although places may be found where LSTs can beach it is probable that pontoons will be required.

EXITS considered suitable for personnel but not initially for vehicles or tanks. Such exits could be readily developed in order to gain access to the main road which appears to be at sea-level.

The beach is not considered good for maintenance.

DEFENSES: There are MGs along the entire length of the beach. Near the southern end is a road block and an AT gun. There are no known defenses behind the beach. The CD btry at N 849008 (if occupied), the railway battery at N 862002, and possibly one or more guns of the DP battery at N 855975 could all fire on craft approaching the beach.

ANNEX A - AVALANCHE

BEACH REPORT

BEACH 33A

AGROPOLI

Location of center: $40^{\circ} 21' 15''$ N., $14^{\circ} 59' 12''$ E.
Coordinates: GSGS 4229, 198 III; S-836948.
Length: 300 yds. (150 yds. on each side of mole)
Width: 50 yds. on North of mole; 5 yrs. South of mole.

This beach is at the head of a small cove with a 300 ft. mole in its center. The sea approach is clear and it should be easy to locate as it is flanked by rocky cliffs and has the village of AGROPOLI bordering on the northeast.

The beach is of sand and shingle. There may be submerged rocks to westward of the mole but it is not believed that they will interfere with beaching of LCA, LCVP or LCM.

Gradient is estimated 1:50 to 1:75 with no sand bars. Suitable on both sides of the mole for landing boats and probably on the eastern side of the mole for LSTs. Depths along the quayed port of the mole are probably about 3 feet.

EXITS. Road from root of mole, leading steeply into the village and thence to minor road running inland. Infantry landing on narrow part of beach west of mole could make their way up slope onto narrow road leading into the village.

This beach considered suitable for small raids. Not suitable for maintenance.

Defenses: There are MGs to the west of the beach, but few defenses in depth to the south of AGROPOLI. The DP battery at N 355975, the railway btry at N 862002, and the CD btry at N 849008 (if occupied) could all fire on shipping approaching the beach.

COMMANDER U. S. NAVAL FORCES

NORTHWEST AFRICAN WATERS

ANNEX A

CHARACTERISTICS OF THEATRE

DISEASES AND HYGIENE

1. DISEASES

a. Malaria

Incidence.

Adequate, recent statistical data pertaining to Malaria in Italy, are difficult to obtain and to evaluate. The reliability of statistics coming from Italy since the Ethiopian War (1935) is questionable and there have been no reports since the beginning of the present war.

Malaria is endemic in most of Italy but due to the draining of the Pontine Marshes and to attempts at malaria control, a decrease in the number of cases was noted until 1938. However, the fact that economic and public health standards have fallen during the present war and that many soldiers returned from the Ethiopian campaign with malaria would suggest that malaria is more prevalent now than during the early 1930's.

Type.

On the analogy of other places in the same degree of latitude and of similar meteorology it is presumed that benign tertian (PLASMODIUM VIVAX) will prevail from April until late Summer and Autumn, and malignant tertian (P. FALCIPARUM) until November. Malaria (P. MALARIAE) may also be present, the ratio being roughly 2 or 3 benign cases to one malignant.

Mosquitoes.

The chief malaria carrier is that common to the MEDITERRANEAN littoral ANOPHELES MACULIPENNIS, of the race LABRANCHIAE in the South and of the race ELUTUS in the north. These breed in many brackish marshes round the coast, and in brackish and fresh inland water. The adult females hibernate during the winter, become active in March and breed throughout the summer. In October, when the first heavy rains begin, the temperature falls, they may fly 2 or 3 miles from their breeding-places and infest houses before settling down for the winter.

Italy's malaria rate being the highest of the Mediterranean countries, it must be presumed that most, if not all other malaria carriers are present and transmit malaria--ANOPHELES SUPERPICTUS, ANOPHELES BIFURCATUS, etc.

b. Dengue and Yellow Fever.

The AEDES AEGYPTI mosquito is to be found throughout ITALY, but most commonly in the coastal areas, where they are responsible for the spread of dengue or breakbone fever. The disease is rarely fatal, but it frequently appears in epidemic proportions and may be the cause of considerable morbidity in troops.

c. Sandfly Fever.

The sandfly, PHLEBOTOMUS PAPATASII is plentiful in Southern ITALY especially about ruined buildings and accumulations of rubble. Large epidemics have occurred after earthquakes, so an influx of non-immune troops coupled with the destruction of buildings by bombs and shell fire might easily lead to severe epidemics, as much as 50 per cent, being affected at the same time.

The fly is active from May to October.

d. Leishmaniasis.

The carrier is PHLEBOTOMUS PERNICIOSUS. Both the dermal (Oriental type) and the visceral (kala-azar) types of leishmaniasis occur in ITALY, mostly in the southern coastal plains. The disease is most common in children, but a few cases are reported in adults each year. Control measures, aimed at the destruction of infected dogs, have not been successful.

e. Relapsing Fever.

The carrier is the spirochete, BORELIA RECURRENTIS. The disease is found in all parts of ITALY. No recent reports of epidemics but is likely to become important under war conditions.

f. Typhus Fever.

In the spring of 1943, ITALY admitted the presence of a "few imported cases" of louse-borne typhus fever. Due to the fact that many people are louse infected and that cases of typhus fever have occurred in areas abroad occupied by ITALIAN troops, this disease is likely to become of great importance under war condition. It is probable that typhus fever occurs in greater numbers than acknowledged by the ITALIAN authorities.

BOUTONNEUSE FEVER is widespread. It is transmitted by the dog tick RHINOCEPHALUS SANGUINEUS, and could be transmitted to soldiers by the tick.

MURINE TYPHUS FEVER or rat fever has been recognized throughout ITALY, especially in port cities. It is possible that due to the breakdown of rat control measures, this disease may become of more importance to man.

g. Undulant (MALTA) Fever.

This milk-borne disease is common in man - 6.4 cases per 10,000 inhabitants with a 4% death rate.

h. Dysenteries and Typhoid.

These diseases are common and widespread as one would expect from the unsanitary conditions: vegetables are manured with human excreta; sewage-disposal systems are often primitive, consisting merely of open canals.

Infection is at its peak from June to August, during the greatest incidence of fly breeding. In 1933 there were in the whole of ITALY 33,000 cases of typhoid, 6,000 of paratyphoid and 875 of bacillary dysentery.

Amoebic dysentery is found in NOLLA, CAMPANIA and LOMBARDIA in ITALY and constitutes an important health problem.

i. Other diseases.

Cholera.

None since 1920.

Plague.

None since 1927.

Hookworm.

Hookworm is widespread. Though the soldier might become infected it would be a rare and easily cured.

2. HYGIENE

The climate is equable throughout all of southern ITALY, and no sharp

changes would be experienced. During the summer (May to October) tropical clothing must be worn; tourists wear neither shirt nor hat. Glare glasses are a boon against both reflection and dust.

The following is a summary of counter-measures to the diseases listed in I above:

a. Malaria.

Measures for the control of malaria can be divided into two classes, one intended to prevent infection and suppressive treatment.

i. Preventive Measures.

During the active mosquito season (May to November) the following measures should be enforced.

(1) Temporary camps should be located on elevated ground, at least one mile, and preferably two miles from swampy or marshy areas and the same distance from native population groups.

(2) When permanent camps are established mosquito breeding areas should be drained, oiled or sprayed with paris green to eradicate larvae.

(3) All personnel should sleep under bed nets, be provided with head nets, gloves and leggins for duty in the open between sunset and sunrise and also be provided with mosquito repellants.

(4) Living quarters should be fumigated daily with pyrethrium to kill adult mosquitoes.

(5) Movements and activities in the open between sunset and sunrise should be restricted to that absolutely necessary.

ii. Suppressive treatment.

This consists of giving anti-malarial drugs in sub-clinical doses to prevent the appearance of the clinical symptoms of the disease in persons harboring the parasites. Since quinine stocks are extremely limited recourse must be had to atabrine. It requires considerable time to build up a sufficient level of the drug in the body to be effective, hence the treatment should be instituted 1 week before entering a malarious region. A certain amount of gastro-intestinal discomfort may be expected in about 40% of those taking atabrine following the first 3 or 4 doses after which tolerance is established. Less than 1% prove to be permanently intolerant.

Suppressive treatment should be given as follows:

(1) One 0.1 gram tablet taken with a glass of water after the evening meal on Monday, Tuesday, Thursday and Friday.

(2) After tolerance is established this may be modified to the taking of two 0.1 gram tablets with water after the evening meal on Monday and Thursday or the taking of one 0.1 gram, with water, after breakfast and after supper on Monday and Thursday. Both preventive and suppressive measures should be closely supervised by qualified officers.

b. Dengue and Yellow Fever.

Only after establishment and during the summer need the AEDES AEGYPTI mosquito be controlled. Houses should be inspected weekly, and all containers controlled. Since introduction by air is possible, airfields and aircraft should be supervised.

c. Sandfly Fever.

Troops should not be billeted near ruins during summer, and ruins

ould be sprayed weekly with malariol. Nets as for malaria (see above), but of
cial mesh.

d. Leishmaniasis.

As for sandfly fever (see above). Contact with children should be avoided, and all dogs should be forbidden in camps (dogs with sores should be killed).

e. Relapsing Fever.

Regulation delousing routine.

f. Typhus Fevers.

Disinfestation of gear, and inspection of troops disembarking from endemic areas (e.g. NORTH AFRICA).

g. Undulant (MALTA) Fever.

No unboiled milk from any source, except tinned ration.

h. Dysenterics and Typhoid.

Rigid control of carriers and sewage, as prescribed in Service Manuals of Hygiene. Refuse is more economically disposed of by controlled tipping. Fly traps, and swatting as a regular routine, are very helpful. Other measures are: food protection from source to mouth; avoidance of native food-handlers; 100 per cent, T. B.

Water-supplies, from whatever source, should be suspected, and until proper water-points are established, treated (as in the field) by filtration and chlorination.

i. Other Diseases.

Hookworm.

Bare hands or feet should not touch soil near houses or manured fields if suspicious symptoms arise, trench-diggers should be examined after 20 days for eggs.

Venereal diseases.

This is common and widespread. Before landing, troops should, if possible, be supplied with the available preventatives; thereafter, when troops become more static, P.A.C.'s should be established.

COMMANDER U.S. NAVAL FORCES

NORTHWEST AFRICAN WATERS

ANNEX A - AVALANCHE

ENEMY STRENGTH

GROUND FORCES

CAUTION: The military terms used are those of the U.S. Army. Attention is directed to the following differences between British and American terminology:

American	British	Italian	German
(Infantry) regiment	Brigade	Reggimento	Regiment
Regimental combat team	Brigade group		
(Artillery) battalion	Battery	Gruppe	Abteilung
(Artillery) battery	Troop	Batteria	Batterie
(Cavalry) squadron	Regiment	Gruppe	Abteilung
(Cavalry) troop	Squadron	Squadrone	Schwadron

1. Axis garrison in S. ITALY, SARDINIA, and CORSICA.

See battle order map entitled "Axis garrison in S. ITALY, SARDINIA, and CORSICA". The map shows the dispositions of division and location of Corps and Army headquarters. The Corps and Army boundaries are deduced and are not confirmed. The garrison in CALABRIA is naturally undergoing rapid change due to the fall of MESSINA. It is assumed that parts of the divisions which fought in SICILY are now in ITALY. It has been reported that elements of the Hermann Goering and 1st Flieger Divisions are in the NAPLES area and elements of the 29th Armored Infantry Division in the REGGIO DI CALABRIA area.

The Italian coastal divisions are composed of second rate troops, are disposed along the coast manning the beach defenses, and are designed to take up the initial shock of a landing and gain time for the mobile reserve of the first-line (Italian and German) divisions to counter-attack. The fighting efficiency of the coastal divisions is of a low order; in SICILY they fought very poorly.

2. Axis garrison GAETA-NAPLES-SALERNO area.

See battle order map entitled "Axis garrison GAETA-NAPLES-SALERNO area". The map shows only fighting units, chiefly infantry and artillery, with some dismounted cavalry. No anti-aircraft nor service units are shown.

3. Coast defense batteries.

The collation maps, issued in quantity, have an overprint showing defenses, including CD batteries. The beach sketches, issued in quantity, have a red overprint of defenses which includes CD batteries for the area they cover.

Sketches of individual batteries and surroundings have been issued in quantity. These include all the CD and dual purpose batteries in the immediate assault area, and certain other batteries within the GAETA-NAPLES-SALERNO area. An index map of all known CD batteries in the whole area has been distributed; it indicates with an asterisk the batteries of which sketches have been furnished.

The battle-order of artillery units in the GAETA-NAPLES-SALERNO area supplements the information derived from aerial photographs concerning CD batteries and in some cases gives a clue to the caliber of CD guns.

For technical data concerning Italian artillery (range, traverse, rate of fire, etc.) see "Data on Italian Artillery" published by this headquarters 20 April 1943.

The Italians use mobile coast artillery, principally the 149/35 gun, for coast defense. These mobile guns may be held in reserve ready to proceed to prepared emplacements along the coast in the event of an alert.

CAUTION: The principal source of information concerning CD batteries and beach defenses is the interpretation of aerial photographs. The skillful use of camouflage by the enemy and the lack of sufficient photographic cover render it possible that defenses exist where none have been reported. Batteries may be placed in cliffs or inside buildings and consequently would never appear in photographs.

4. Beach defenses

See collation maps and beach sketches. A paragraph on the defenses of the individual beaches is a part of the beach descriptions published under "Characteristics of Theater". Although no precise information is available concerning land mines, it must be assumed that they will be extensively used in beach defense. Similarly, searchlights must be expected.

5. Armored trains

The Italians are known to rely heavily on armored trains, mounting up to 152 mm (6") guns, for the defense of their long coast-line between defended ports. The only railway battery in the area of operations whose location is definitely known is the one at N 863002. In general, however, any stretch of railroad track is a potential coastal battery. Attention is invited to the many railroad tunnels and to the fact that armored trains can be hidden in them.

COMMANDER U.S. NAVAL FORCES

NORTHWEST AFRICAN WATERS

ANNEX A - AVALANCHE

ENEMY STRENGTH

SEA FORCES

1. GENERAL.

Invariably, the first question to be asked when the Italian Navy is discussed is: "Will the fleet put to sea, or will it not?" Recent political events as well as activities of major naval units themselves would seem to indicate that the odds that they will come out are better now than they have been for many months. Firstly, photographic and visual reconnaissance have shown major fleet units to be working up, and secondly, units have been regrouped so as to render possible a decision to undertake missions at sea.

2. DISPOSITION.

Since the capture of the Island of SICILY, the Italian Fleet is for all practical purposes divided into two separate groups. The stronger of the two is in the North based on SPEZIA and GENOA, as follows:

<u>SPEZIA</u>	<u>GENOA</u>
3 - 15" BBs (Littorio Class)	3 - 6" CL (Condottieri Class)
2 - 6" CLs (Condottieri Class)	1 drydocked)
1 - 5.3" CL (Regolo Class)	4 to 5 DDs
12 to 15 DDs	7 to 9 PTs
6 to 8 TBS	
10 to SS	
3 to 5 PT	

The other force in the South is based at TARANTO, and its strength is as follows:

<u>TARANTO</u>
2 - 12.6" BEs (Cavour Class)
1 - 6" CL (Condottieri Class)
2 - 5.3" CLs (Regolo Class)
4 to 6 DDs
5 to 7 TBS
11 SS
3 to 5 PTs

A factor to be considered in the case of the units at TARANTO is that they can be reinforced by units in the UPPER ADRIATIC, although passage through the STRAIT OF OTRANTO is becoming increasingly dangerous for them:

<u>POLA</u>	<u>ANCONA</u>
1 - 12.6" BB (Cavour Class)	1 - 5.3" CL (Regolo Class)
2 to 3 TDs	

Section 5 gives the location of Italian fleet units as of 18 August 1943, and will be amended as changes are effected.

3. AXIS SUBMARINES.

Concentrations of enemy SS will, as is to be expected, appear wherever they can best harass our lines of communications. Areas most likely for SS concentrations are in the TYRRHENIAN SEA and the approaches to it. Discounting those craft used for transports, minelaying, and tankers, AXIS offensive SS strength is estimated as follows:

	<u>Total</u>	<u>Usually on patrol</u>
ITALIAN	30	8-10
GERMAN	15	4-5
	<hr/>	<hr/>
	45	12-15

4. IDENTIFICATION

One of the most important and yet most neglected element of naval information is that of identification of enemy vessels. Instances of mistaken identity are often due to carelessness and/or failure to study available subject material, and consequences are too often tragic. Listed below are some ONI publications to help all hands in becoming familiar with enemy naval units:

- ONI 202 - "ITALIAN NAVAL VESSELS"
- ONI 203 - "FRENCH NAVAL VESSELS" (Study DDs only)
- ONI 204 - "GERMAN NAVAL VESSELS" (Study SS only)
- ONI 223 - "SHIP SHAPES" (Explains basic principles in design and construction of all AXIS navies)

5. LOCATION OF AXIS UNITS AS OF 18 AUGUST 1943.

PORT	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	REMARKS
	: BB	: CA	: CL.	: DD	: TB	: DE	: PT	: SS	: CVS:		
Marseilles	:	:	:	:	:	1	7	:	:	:	
Toulon	:	:	:	8	6	:	8	5	:	3 of DDs are heavies	
Savona	:	:	:	1	:	:	:	:	:	Ex-French heavy DD	
Genoa	:	:	3	5	1	3	7	4	:	SS are in drydock. CL are 6".	
Spezia	3	2	3	13	6	5	3	9	:	(BBs are 15". CAs both damaged. Of CLs, 2 are	
Leghorn	:	:	:	0	:	:	:	:	:	(6". 1 is 5.3". 2 of DDs are heavies.	
Elba	:	:	:	1	1	2	:	:	:		
Gaeta	:	:	:	:	2	6	:	:	:		
Bay of Naples	:	:	1	6	2	10	1	9	:	CL is 5.3" uncomplete	
Salerno	:	:	Not used by Naval Units	:	:	:	:	:	:		
Sapri	:	:	:	:	5	:	:	:	:		
Porto Venere	:	:	:	:	0	:	:	:	:		
Taranto	2	:	3	4	5	3	11	:	BBs are 12.6". 1-6" CL		
Brindisi	:	:	:	2	:	4	:	:	2-5.3" CL, 1 DD is heat		
Bari	:	:	:	2	:	:	:	:			
Ancona	:	:	1	:	:	:	:	:	5.3" Regolo Class		
Pola	1	:	:	1	1	3	:	:	BB is 12.6" Cavour Class		
Fiume	:	:	1	3	:	:	:	:			
Maddalena	:	:	:	:	3	3	:	:			
Cagliari	:	:	:	:	:	0	:	:			
San Antico	:	:	:	:	6	:	:	:			

ABBREVIATIONS: BB - Battleship, CA - Heavy Cruiser, CL - Light Cruiser, DD - Destroyer, TB - Light Destroyer, DE - Escort Vessel, PT - Motor torp. boat (Italian MAS, German E-boats), SS - Submarine, CVS - Seaplane Tender.

COMMANDER U. S. NAVAL FORCES

NORTHWEST AFRICAN WATERS

ANNEX A - AVALANCHE

ENEMY STRENGTH

AIR FORCES1. Strength and Disposition of Enemy Air Forces.a. Assumptions:

- i. SICILY is completely in Allied possession.
- ii. The operation is not postponed later than September.
- iii. The Allies have not progressed further than in the extreme Southern tip of ITALY.

b. It is estimated that on D day the strength of the Enemy Air Forces will be as follows (figures are maximum as no forecast is possible of the number of aircraft likely to be destroyed on the ground as the result of Allied bombing attacks):

	ITALY			SARDINIA			S. of 41°			N. of 43°			S. FRANCE & CORSICA			TOTAL		
	Ger.	Ital.	Ger.	Ital.	Ger.	Ital.	Ger.	Ital.	Ger.	Ital.	Ger.	Ital.	Ger.	Ital.	Ger.	Ital.	Ger.	Ital.
L. R. & Torpedo Bombers	-	15	150	30	100	30	100	-	-	-	10	350	85	-	-	-	-	
Bomber Recce	-	40	50	60	-	40	10	-	-	10	10	70	150	-	-	-	-	
Dive Bombers & Ground Attack	-	40	30	40	-	-	-	-	-	-	20	30	100	-	-	-	-	
S. E. Fighters	70	85	170	100	-	90	-	-	-	45	100	285	375	-	-	-	-	
Fighter Bombers	50	-	25	-	-	-	-	-	-	25	-	100	-	-	-	-	-	
T. E. Fighters	-	-	25	-	-	-	-	-	-	-	-	25	-	-	-	-	-	
Tac. R. & Army Coop.	10	20	-	20	-	50	-	-	-	10	20	20	110	-	-	-	-	
	130	200	450	250	100	210	110	-	-	90	160	880	820	-	-	-	-	

c. Serviceability:

German 50% - Italian 25/30%

Long Range Bombers:

The availability of German Bombers is not likely to exceed 40%, so that a maximum effort for any one operation would be 140 aircraft.

Italian Bombers are not likely to operate in any force. The maximum for one operation is probably 10 aircraft.

Fighters and Fighter Bombers:

FW.190 Fighter bombers rapidly lose serviceability, so that if any sustained operations have been undertaken prior to D-day a maximum of 40 serviceable aircraft should be available.

German S.E. Fighters will probably be maintained at 55% serviceability - i.e., approximately 160 aircraft.

Italian Fighters, Dive bombers and Ground attack aircraft are not likely to attain more than 30% serviceability.

d. Main Airfields (German):

Long Range Bombers:

The main concentration is likely to be in the FOGGIA area, with smaller groups at VITERBO, GROSSETO, PLACENZA and SOUTH FRANCE.

Fighter Bombers and Dive Bombers:

These are likely to be based in the NAPLES area at AQUINO, CAPUA and MONTE CORVINO.

Fighters:

NAPLES area: NAPLES/GRAZZANISE, CAPUA and MONTE CORVINO area.

FOGGIA: FOGGIA satellites.

S. ITALY: Airfields South of MONTE CORVINO and North of SCALEA; also possibly in the heel of ITALY.

e. Scale of Effort:

i. Owing to the impossibility of assessing the effect of Allied bombing attacks on strength and serviceability of operational units, it is difficult to estimate any probable scale of effort. Allied attacks, however, are unlikely to be as successful as those on SICILIAN airfields prior to "HUSKY" as the G.A.F. has at last learned by experience and has adopted very wide dispersal, particularly of Bomber aircraft.

ii. It is possible, however, that approaching Allied convoys if discovered in good time by recce aircraft will be attacked, by night, by up to 140 aircraft. This would include double sorties by some aircraft. The efficiency of German Bomber aircraft has recently deteriorated so rapidly that a considerable proportion of these sorties will be ineffective; hence probably only about 60% of these will reach the target.

By day, small Bomber forces of up to 25 aircraft with Me.109 Fighters as escort may operate against assault convoys whilst these are still within range of Allied land-based Fighters. When outside this range the German forces used are likely to be greater.

iii. FW.190 Fighter bombers may maintain an effort of 60-70 sorties per day for two or three days. Thereafter this is likely to decrease to 35-45.

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2. Types and Characteristics of Enemy Aircraft likely to be encountered.

a. <u>GERMAN</u> <u>TYPE</u>	: Number : Number : Of : Engines	: Vertical : Tail : Surfaces	: WING	: Approx. Max. : Radius of : Action, : Statute Miles.
<u>Long Range Bombers:</u>				
Junkers 88	Ju 88	2	1	: low wing : 650 : monoplane:
<u>Bomber Reconnaissance:</u>				
Junkers 88	Ju 88	2	1	: low wing : 800
Heinkel 111	He 111	2	1	: monoplane: 1000
<u>Torpedo Bombers:</u>				
Junkers 88	Ju 88	2	1	: low wing : 650
Heinkel 111	He 111	2	1	: monoplane: 1000
<u>Dive Bomber:</u>				
Junkers 87	Ju 87	1	1	: low wing : 200 : monoplane:
<u>Fighter Bomber:</u>				
Focke-Wulf	FW 190	1	1	: low wing : 250 : monoplane:
<u>Single Engine Fighter:</u>				
Messerschmitt 109	Me 109	1	1	: low wing : 300 : monoplane:
<u>Twin Engine Fighters:</u>				
Messerschmitt 110	Me 110	2	2	: low wing : 400
Messerschmitt 210	Me 210	2	1	: monoplane: 700
<u>Tactical Reconnaissance:</u>				
Messerschmitt 109	Me 109	1	1	: low wing : 300 : monoplane:

b. <u>ITALIAN</u> <u>TYPE</u>	: Number : Vertical : Tail : WING			: Approx. Max. : Radius : Of Action, : Statute Miles	
	: Number : Vertical : Tail : WING			: Approx. Max. : Radius : Of Action, : Statute Miles	
	: Of Engines : Surfaces:				
	:	:	:	:	:
<u>Bomber Reconnaissance:</u>	:	:	:	:	:
Savoia-Marchetti 79	SM 79	3	1	(: low wing	800
Savoia-Marchetti 84	SM 84	3	1	(: monoplane	700
Cantieri Z 1007	CZ 1007	3	1	(: mid wing	550
Fiat BR 20	BR 20	2	2	(: monoplane	675
<u>Torpedo Bombers:</u>	:	:	:	:	:
Savoia-Marchetti 79	SM 79	3	1	(: low wing	625
Savoia-Marchetti 84	SM 84	3	1	(: monoplane	520
<u>Single Engine Fighters:</u>	:	:	:	:	:
Macchi 200	Mc 200	1	1	(: low wing	215
Macchi 202	Mc 202	1	1	(: monoplane	210
Macchi 205	Mc 205	1	1	(: low wing	
Fiat G 50	G 50	1	1	(: monoplane	205
Fiat CR 42	CR 42	1	1	(: biplane	285
Reggiane 2001	Re 2001	1	1	(: low wing	470
				(: monoplane	
				:	
				:	
<u>Tactical Reconnaissance:</u>	:	:	:	:	:
Caproni 311	Ca 311	2	1	(: low wing	790
Caproni 312	Ca 312	2	1	(: monoplane	790
Caproni 313	Ca 313	2	1	(: low wing	750
				(: monoplane	
Fiat CR 42	CR 42	1	1	(: biplane	
				:	
				:	
<u>Coastal:</u>	:	:	:	:	:
Cantieri Z 501	CZ 501	1	1	(: parasol	850
				(: monoplane	
Cantieri Z 506	CZ 506	1	1	(: mid wing	785
				(: monoplane	
				:	

NOTE: The figures for radii of action are very rough approximations. They represent estimated maximum radii under actual operating conditions without allowance for time over target.

c. Silhouettes of Selected Allied and Enemy Aircraft.

See Appendix I attached.

NOTE: Not included in Annexes to be distributed to higher echelons.

3. German and Italian Aircraft Operations against Surface Vessels.

a. General.

Surface vessels must anticipate attacks by German and Italian aircraft. These attacks may range from attacks by a single aircraft to coordinated attacks by large numbers of escorted bombers and torpedo bombers.

b. Types of Aircraft.

The types of offensive aircraft most likely to be encountered in such attacks are as follows:

German:

Bombers - Ju 88, He 111.

Torpedo Bombers - Ju 88, He 111

Fighter Bombers - FW 190.

Dive Bombers - Ju 87.

Italian:

Bombers - SM 79, SM 84, BR 20.

Torpedo Bombers - SM 79, SM 84.

Dive Bombers - Ju 87.

c. Tactics.

i. Torpedo Bombing.

In the present operation attacks by torpedo carrying aircraft should be anticipated.

In a recent attack on a convoy in the Western Mediterranean the following tactics were used. The attack was carried out by 37 He 111's and 8 Ju 88's each aircraft carrying a torpedo and bombs. The He 111's were first sighted in line ahead flying parallel to the convoy on the Starboard beam just above the horizon at about 12 to 15 miles distance. The aircraft continued on their course until they reached a position 45° from the direction in which the convoy was proceeding. They then turned in to attack from out of the sun in line abreast. Gun fire from the escort ships broke up the formation at 8,000 yds. From then on the aircraft attacked individually and from all directions. The attack was concentrated upon escort vessels and the leading ships of the convoy. Torpedoes were released at ranges from 3,000 to 2,000 yds. Seven enemy aircraft flew between lines of the convoy turning in to attack ships on either side. After releasing their torpedoes the aircraft attacked with bombs and machine gun fire from under 100 feet. The tactics of the Ju 88's was similar in all respects except that the approach was made from astern.

Although the number of aircraft involved in the above attack is considerably larger than usual, the tactics adapted are typical and may be expected in the present operation.

It is quite possible that attacks similar to one described will be coordinated with high level bombing attacks. In such cases the torpedo bombers will launch their attacks immediately after the high level bombers have released their bombs.

Fighter protection may be expected when within range of enemy fighters.

ii. Bombing.

It is estimated that only about 30 to 60 Ju 87's will be in the theatre of operations on D day. Because of the small number anticipated and the vulnerability of these aircraft to fighter attacks, it is believed that Dive Bombing will not constitute a major hazard to surface vessels as a whole.

Dive bombing by Ju 87's is carried out at angles of from 60° to 80°. The height of release varies. Dives usually start in the neighborhood of 12,000 feet with releases from 800 to 1500 feet although some releases have been reported as low as 500 feet. At times aircraft have circled overhead and maneuvered for position in formation before attacking and at other times have broken formation at some distance from the ships and attacked individually.

High level bombing (10,000 to 15,000) feet) by Ju 88's, He 111's and SM 79's should be anticipated at all times. The above aircraft and in addition FW 190 fighter bombers may also attempt very low level ("mast head") or glide bombing.

Low level bombing may be coordinated with high level bombing, the low level bombers coming in immediately after the high level bombers have released their bombs. During the approach and getaway the low level bombers will fly close to the water (roughly within 100 feet) and will attempt, where the situation permits, to fly between the ships in such a manner that they cannot be fired upon without endangering other ships. Release is made just before the aircraft passes over the ship.

Glide bombing, most frequently carried out by Ju 88's, is usually begun at about 10,000 to 12,000 feet. A shallow dive is made and the bombs released between 1000 and 2000 feet.

A reconnaissance aircraft is often used to shadow surface vessels prior to an attack. This plane notes the position of the ships and sometimes flies to a distance of 50 miles before transmitting position, course, and other details to its base. If then returns and continues to shadow the ships until the attacking force arrives.

4. Airfields and Landing Grounds within effective Fighter and Fighter-Bomber range of GAETA and SALERNO GULF.

See Appendix 2

5. Airfields and Landing Grounds in ITALY South of 43° North, SARDINIA and CORSICA.

See Appendix 3.

FOR RECOGNITION PROCEDURE BETWEEN SHIPS AND AIRCRAFT SEE AIR PLAN ANNEX F, PART III "PUBLICATIONS".

FRIENDLY AIRCRAFT TAKING PART IN OPERATIONS ARE LISTED IN AIR PLAN ANNEX F, APPENDIX 8.

17 Aug 43.

ROYAL BRITISH NAVY

APPENDIX 2
(See Map Attached)

NOTES ON THE CAPACITY, ACTIVITY AND CONDITION OF AIRFIELDS AND LANDING GROUNDS WITHIN THE MOST EFFECTIVE RADIUS OF ACTION FOR ENEMY FIGHTERS AND FIGHTER BOMBERS (ESTIMATED TO BE IN THE NEIGHBORHOOD OF 110 MILES) FROM SALERNO AND GAETA GULFS.

Four Landing Grounds deemed to be of no present operational importance are omitted. These are CISTERNA di ROMA, NETTUNO, SAN LORENZO and STIMIGLIANO.

It should be borne in mind that there is ample space for landing strips in the NAPLES area. New Landing Grounds may be expected as the operation develops.

ABBREVIATIONS

A/D - Airdrome.
L/G - Landing Ground.
F - Fighters or Fighter-Bombers.
LB - Light Bombers.
MB - Medium Bombers.
HB - Heavy Bombers.

CAVEAT.

By "capacity" is meant "operational capacity" and not the number of aircraft which an airfield may accommodate when used for landing purposes only or as a depot or pool. It is quite possible, therefore, for the number of aircraft observed at a given airfield to exceed the estimated capacity.

(Airfields are listed in the order of their proximity to NAPLES)

NAME AND LOCATION	CAPACITY	ACTIVITY	REMARKS
Naples/Capodichino A/D 40° 53' N 14° 17' E	100 normal 150 emergency	Aug 1/14 3/32 F 10/46 other a/c	253 tons of bombs were dropped in 5 attacks by NAAF between July 17 and Aug. 6.
Naples/Pomigliano A/D 40° 55' N 14° 24' E	50 normal 80/90 emergency	Aug 1/14 0/2 F 5/47 other a/c. No a/c observed Aug 11 and 13.	62.7 tons of bombs were dropped in 1 attack by NAAF between July 17/23.
Grazzanise L/G 41° 04' N 14° 06' E	3 Sqds F or 2 Sqds LB	Aug 1/14 4/49 F 10/36 other a/c	No attacks by NAAF between July 17 and Aug 6.
Capua A/D 41° 07' N 14° 11' E	5 Sqds F or 4 Sqds MB Limited use by H.B.	Aug 1/14 11/74 F 20/73 other a/c	51 tons of bombs were dropped in 1 attack by NAAF between July 24/30.
Benevento L/G 41° 11' N 14° 44' E	2 Sqds F	Aug 1/14 No reports	No attacks by NAAF between July 17 - Aug 6.
Monte Corvino A/D 40° 37' N 14° 55' E	3 Sqds F or 2 Sqds LB	Aug 1/13 2/27 F 8/24 other a/c	122.5 tons of bombs were dropped in 4 attacks by NAAF between July 17/30.

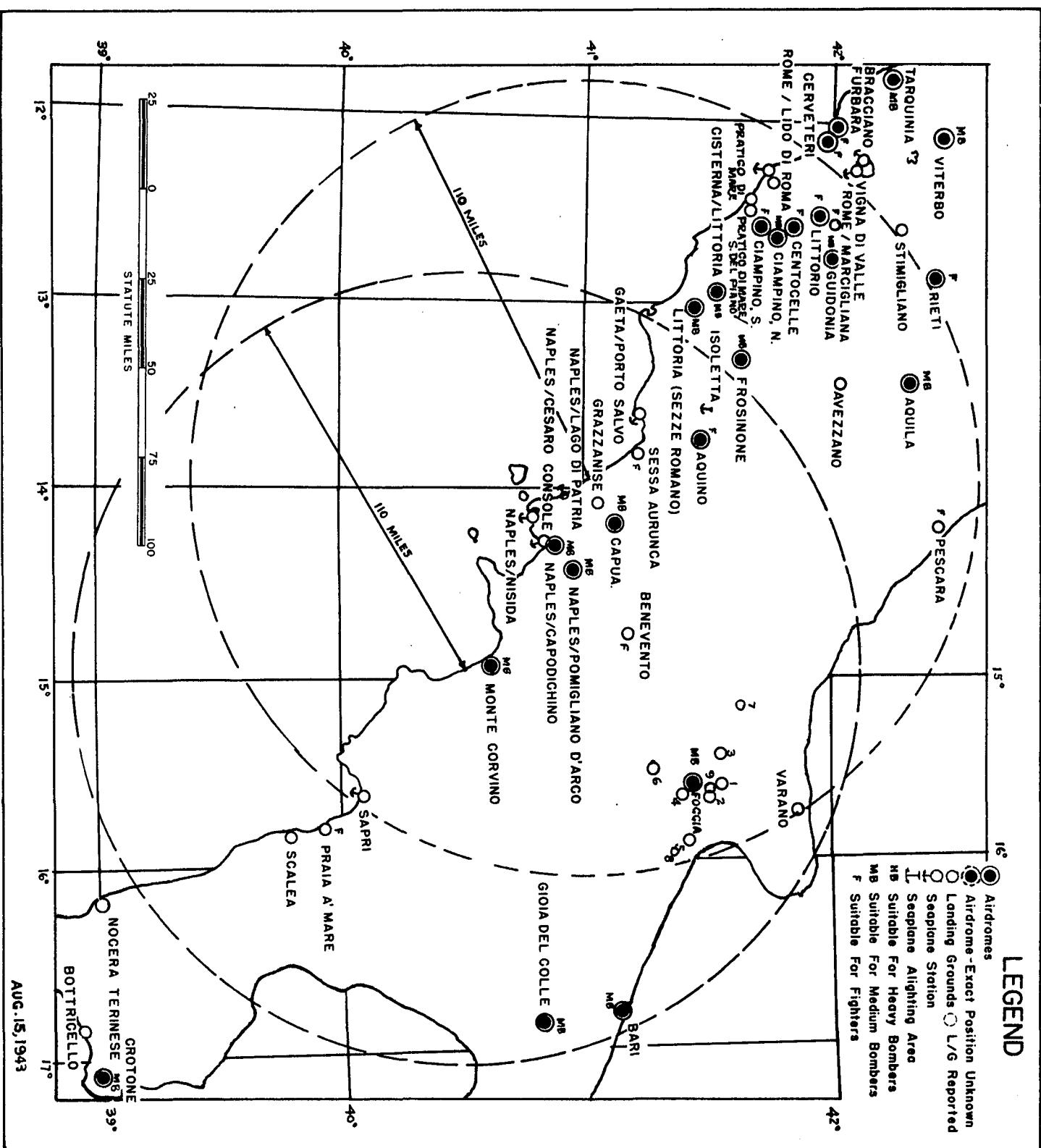
NAME AND LOCATION	CAPACITY	ACTIVITY	REMARKS
Sessa Aurunca L/G 41° 14' N 13° 47' E	12 normal 20 Emergency cy	Aug 1/11 1 F 1. other a/c	No attacks by NAAF between July 17 and Aug 6.
Aquino A/D 41° 30' N 13° 43' E	36 normal 50 emergency cy	Aug 1/14 0/26 F 8/12 other a/c	205 tons of bombs were dropped in 5 attacks by NAAF between July 17 and 30th.
Frosinone A/D 41° 39' N 13° 18' E	25 normal 50 emergency cy	Aug 1/14 2/9 F 36/49 other a/c	No attacks by NAAF between July 17 and Aug 6.
Littoria (Sezze Romano) A/D 41° 29' N 13° 02' E	24 normal 40 emergency cy	Aug 1/14 1 F 2/6 other a/c	No attacks by NAAF between July 17 and Aug 6.
Foggia A/D 41° 26' N 15° 32' E	normal 10 MB 15/30 F	Aug 1/14 4/12 F 3/30 other a/c	No attacks by NAAF between July 17 and Aug 6.
Satellite 1 Foggia/S. Nicola L/G 41° 33' N 15° 33' E	normal 60 MB	1/4 F 21/96 other a/c	No attacks by NAAF between July 17 and Aug 6.
Satellite 2 Foggia/Tortorella L/G 41° 30' N 15° 40' E	normal 60 MB	8/15 F 17/48 other a/c	No attacks by NAAF between July 17 and Aug 6.
Satellite 3 Foggia/Palmori L/G 41° 33' N 15° 28' E	normal 50 MB	0/12 F 23/70 other a/c	No attacks by NAAF between July 17 and Aug 6.
Satellite 4 Foggia/Fandetta L/G 41° 26' N 15° 38' E	normal 30/40 MB	18/20 F 0/18 other a/c	No attacks by NAAF between July 17 and Aug 6.
Satellite 5 Foggia/Morin L/G 41° 25' N 15° 55' E	normal 50/60 MB	7/38 a/c not F	No attacks by NAAF between July 17 and Aug 6.
Satellite 6 41° 17' N 15° 20' E L/G	normal 20 F 10/15 MB	Aug 9 no a/c	No attacks by NAAF between July 17 and Aug 6.
Satellite 7 41° 37' N 15° 07' E L/G	normal 40 F	27/31 F 0/1 other a/c	No attacks by NAAF between July 17 and Aug 6.
Satellite 8 41° 21' N 15° 57' E	14/61 a/c not F		No attacks by NAAF between July 17 and Aug 6.

BIGOT-AVALANCHE

SECRET
EQUALS BRITISH MOST SECRET

NAME AND LOCATION	CAPACITY	ACTIVITY	REMARKS
Satellite 9 41° 30' N 11° 30' E 15° 37' E 11° 28' E		: 3/4 F : 1/2 other : a/c	: No attacks by NAAF between July 17 and Aug 6.
Cisterna/Littoria A/D 41° 32' N 12° 55' E	: 26 normal : 50 emergency	: Aug 1/13 : 16/26 F : 38/56 other : a/c	: No attacks by NAAF between July 17 and Aug 6.
Praia a Mare L/G 41° 39' N 12° 26' E	: normal : 3 Sqds F : Emergency : 6 Sqds F	: Aug 1/11 : 1/2 F : 1/2 other : a/c : Aug 6/7 no : serviceable : a/c	: No attacks by NAAF between July 17 and Aug 6.
Pratica di Mare L/G 41° 39' N 12° 26' E	: 20 F : 60 MB	: Aug 1/11 : 1/5 F : 33/66 other : a/c	: 52.5 tons of bombs were dropped in 1 attack by NAAF between July 24/30.
Pratica di Mare/S. Del Piano L/G 41° 40' N 12° 27' E	: 15 F	: Aug 1/11 : 9/11 small : a/c	: No attacks by NAAF between July 17 and Aug 6.
Scalea L/G 39° 47' N 15° 48' E	: normal : 24 F : Emergency : 40 F	: Aug 1/5 : 3/14 F : 3/7 other : a/c : Aug 6/11 no : serv. a/c	: 36.2 tons of bombs were dropped in 2 attacks by NAAF between July 24/30.
Rome/Ciampino (N&S) A/D's 41° 48' N 12° 35' E	: normal : 80 : Emergency : 110	: Aug 1/14 : 2/29 F : 18/46 other : a/c	: 327 tons of bombs were dropped in 5 attacks by NAAF between July 17/23.
Rome/Centocelle A/D 41° 51' N 12° 33' E	: normal : 40 : Emergency : 60	: Aug 1/14 : 2/20 F : 46/55 other : a/c	: No attacks by NAAF between July 17 and Aug 6.
Aquila A/D 42° 19' N 13° 25' E	: 30/50 a/c	: Aug 1/13 : 3/4 a/c not : F	: No attacks by NAAF between July 17, and Aug 6.
Guidonia A/D 41° 59' N 12° 44' E	: normal : 40 a/c : Emergency : 60 a/c	: Aug 1/14 : 1/15 F : 37/49 other : a/c	: No attacks by NAAF between July 17 and Aug 6.
Pescara A/D 42° 26' N 14° 11' E	: 30/50 a/c	: Aug 1/13 : 39/70 F : 15/47 other : a/c	: No attacks by NAAF between July 17 and Aug 6.

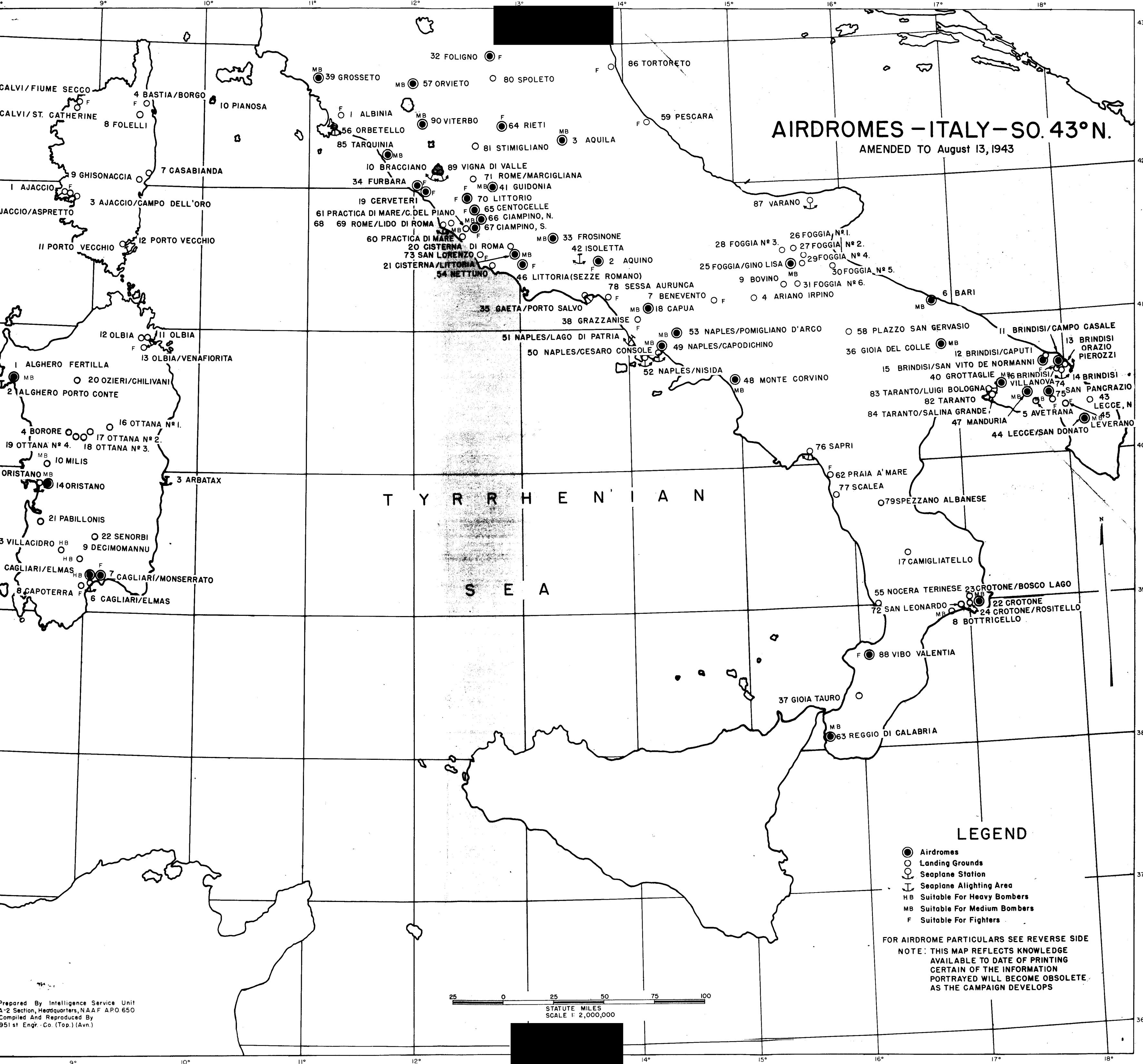
NAME AND LOCATION	CAPACITY	ACTIVITY	REMARKS
Rome/Littorio A/D 41° 57' N 12° 30' E	normal : 24 Emergency : 40	Aug 1/14 : 1/5 F 15/30 other : 2/c	No attacks by NAAF between July 17 and Aug 6.
Rome/Marcigliana L/G 42° 02' N 12° 32' E	15/30 a/c	Aug 1/14 : 16/27 a/c not F	No attacks by NAAF between July 17 and Aug 6.
Rieti A/D 42° 25' N 12° 51' E	36/60 a/c	Aug 1/13 : 9/20 F 7/34 other : a/c	No attacks by NAAF between July 17 and Aug 6.
Bari A/D 41° 09' N 16° 47' E	normal : 60 Emergency : 90	Aug 1/11 : 1/6 F 10/25 other : a/c	No attacks by NAAF between July 17 and Aug 6.
Gioia del Colle A/D 40° 47' N 16° 56' E	normal : 40 Emergency : 50	Aug 1/11 : 3/22 F 17/40 other : a/c	No attacks by NAAF between July 17 and Aug 6.
Cerveteri A/D 41° 53' N 12° 04' E	normal : 24 Emergency : 40	Aug 1/14 : 32/61 F 0/4 other : a/c	No attacks by NAAF between July 17 and Aug 6.
Furbara A/D 42° 00' N 12° 01' E	normal : 24 Emergency : 40	Aug 1/14 : 2/3 F 1/55 other : a/c	No attacks by NAAF between July 17 and Aug 6.



AUG. 15, 1943

AIRDROMES - ITALY - SO. 43° N.

AMENDED TO August 13, 1943



LIST OF AIRDROMES SOUTHERN ITALY, SOUTH OF LATITUDE 43°

AMENDED TO AUGUST 13, 1943

ACERIA, see NAPLES/ROMIGLIANO D'ARCO.
 AGOSTINO BRUNETTA, see CRESTELLO.
 1. ALBINA, $42^{\circ}31'00''$ E., $12^{\circ}16'30''$ E. 3 mi. NE of Albinia. 1100 x 440 yds; believed only serviceable in summer.
 ALFREDO BARRELLI, see GUIDELLA.
 ANTONIO SOSPESI, see TARGIOLA.
 ANTONIO TARTAGLIO, see TARTAGLIO.
 ANTONIO RAMIREZ, see GIOIA DEL COLE.
 ANTONIO POLOPO, see BRINDISI/CAMP CASALE.
 APPIO MONTI, see CAVATRI.
 2. AQUINO, $41^{\circ}29'35''$ E., 1 mi. E. of Aquino NW/SE 1200 yds NW/SE 1150 yds. 2 hangars & other bldgs N. border, concrete paths connect all bldgs.
 3. AQUINO (PIRELLI ARNONE), $42^{\circ}19'25''$ E., $12^{\circ}25'30''$ E. NW/SE 1200 x NW/SE 600 yds. The L/G is situated 24 mi. SE of Aquino. 1 hanger with terrace apron. Admin bldg in S. SW. corner.
 4. ARIANO IRPINO, $41^{\circ}12'00''$ E., $15^{\circ}08'00''$ N. 4 mi. NE of Ariano. NW/SE 900 yds NW/SE 300 yds approx. Grass surface. 2 small bldgs NW corner, 1 on E. boundary.
 5. AVETRANA L/G, $42^{\circ}14'15''$ E., $17^{\circ}41'30''$ E. 2 miles NW of Avetrana & 31 miles SE of Manduria, lying between the towns (4 miles to S) and the Francesco Fontana/Locardi L/G 2 miles to N. Landing strip NW/SE 1500 yds NW/SE 1100 yds. Runway NW/SE 1900 yds along S. side of road. Approximate distance between Avetrana and Locardi L/G is 10 miles. Farm buildings 300 yds NW/SE. Alt. 750 ft.
 6. BARI (PRINCIPE UMBERTO DI SAVOIA) $41^{\circ}06'30''$ E., $16^{\circ}47'00''$ N. 4 mi. NW of Bari. NW/SE 1200 yds. E/W 1500 yds longest run NW/SE 1800 yds; surface grass, good but rough in NW corner. Bldgs 5 hangars (1 with terrace apron), sheds & Admin bldg in SW corner. Dispersal areas along S. & E. boundary's with a/c shelters & parking strip.
 7. BARI (PIRELLI), $41^{\circ}44'15''$ E., 4 miles NW of Bari. 1000 yds on the N side of the road to Punte. Irregular shaped, size approx. 750 yds NW/SE x 675 yds NW/SE; maximum run is NW 970 yds. 1 medium hanger on N. bndry. 3 sheds & 1 small a/c shelter to E. Admin bldg in SW corner.
 8. BATTAGLIO, $38^{\circ}55'40''$ E., $16^{\circ}55'37''$ N. Between the village of Betticuccio and the shore on the S. side of the coast RR. 14 mi. E. of Catania. The L/G is "U" shaped measuring NW/SE 1750 yds. NW/SE 1300 yds. There are 5 small huts near the RR measuring 10' x 16'.
 9. BOVINO, $41^{\circ}11'30''$ E., $15^{\circ}25'10''$ E. 4 mi. NW of Bovino. NW/SE 800 yds NW/SE 500 yds. 1 building in SW corner.
 10. BRACCIANO LAKE, $42^{\circ}07'00''$ E., $12^{\circ}11'00''$ E. On W. shore of Lake/SE. Ample space for alighting.
 11. BRINDISI/CAMP CASALE, (ANTONIO POLOPO), $40^{\circ}39'20''$ E., $17^{\circ}05'40''$ N. 14 mi. N. of Brindisi, due W. of outer harbour. 1400 x 1200; concrete runway NW/SE 1100 yds, surface grass covered; extensive drainage to S. Probably liable to become water-logged. 3 hangars in S. corner. Barrack bldgs & 2 a/c shelter, terrace type bldgs in E. corner. Barrack bldgs in SW. Admin bldg in NW. W/T. D/F. Runway illumination & barrier lighting. Dispersal perimeter with large and small a/c shelters.
 12. BRINDISI/CAPRI, $40^{\circ}11'00''$ E., $17^{\circ}51'15''$ E. 2 1/2 miles NW of Brindisi. 2 1/2 E miles NW of Brindisi/Sea Vte Del Normanni L/G. The L/G is approximately 100 yds from shore. Landing area consists of a narrow strip (still NW) measuring N-S 1100 yds E-W 120 yds. Can be extended in any direction N. Levelled agricultural land. A street which has been filled in where it crosses the landing strip, contains dispersal areas. Altitude 50 ft.
 13. BRINDISI HARBOUR, (ORAZIO POLOPO), $40^{\circ}39'10''$ E., $17^{\circ}51'10''$ E. 2 1/2 miles NW of centre of Brindisi. Alighting areas limited to outer harbour 1800 x 1300 yds calm conditions; good bed weather. On NW quay which is 380 yds long 3 hangars, NW (550 yds) 6 hangars, barracks, sheds & w/shop bldgs; 9 slipways, 3 cranes, 1 radio beacon.
 14. BRINDISI (INNER HARBOUR) $40^{\circ}37'20''$ E., $17^{\circ}55'40''$ E. 1 mi. NW. of Brindisi. 2 hangars, assembly bldgs & w/shops to NW; ample alighting area.
 15. BRINDISI/VIA VITO DI NORMANNI (PIRELLI MARINO CALDO), $40^{\circ}39'40''$ E., $17^{\circ}50'20''$ E., 2 1/2 mi. E. of Brindisi. NW/SE 1000 yds. 1 building in SW corner. Rest area in shore S-E 1250 yds. NW 1100 yds; grass surface. 2 medium hangars, bldgs Admin & barrack type grouped to E. Admin bldg & 2 of the hangars in the SW corner.
 16. BRINDISI/VILLANNA, $40^{\circ}36'10''$ E., $17^{\circ}55'35''$ E. 3 1/2 mi. SW. of Brindisi. 2 mi. from the shore of the Adriatic. Rectangular strip measuring N-S 1300 yds E-W 200 yds. Levelled agricultural land still in the course of preparation. Admin bldg in SW corner. Dispersal area in surrounding fields.
 17. CAMPOLARO LAKE, $40^{\circ}15'00''$ E., $16^{\circ}49'30''$ N. 2 1/2 mi. NW of Ossuna, 24 mi. N of the Cesena/San Giovanni In Pianura road. Roughly rectangular strip, orientated N-W length 1350 x 200 yds. Grass surface well drained. 2 barrack type bldgs. 1 still u/E 200 yds SW of the E. end of the L/G.
 18. CAMPOLARO LAKE, see BRINDISI/CAMP CASALE.
 19. CANTINA, (CARLO SALOMONI), $41^{\circ}07'00''$ E., 2 mi. N. of Capua. NW/SE 1000 yds. 9 hangars, w/shops Admin bldg to E. CAMPO DI FRESCONE, see ROMA/LIDO DI ROMA.
 20. CANTIERE (INNER HARBOUR) $40^{\circ}35'00''$ E., $17^{\circ}52'00''$ E. 2 1/2 mi. NW by S. of town. Cleared area NW/SE 1000 yds. NW/SE 1000 yds. 1 dispersal area NW/SE 1000 yds. The L/G is a narrow strip 100 yds wide, being overgrown with trees and bushes. 2 medium hangars NW corner, dispersal areas S. of bndry, a wood NW of the bndry may also be used for dispersal; Concrete runway measuring NW/SE 1100 yds across the S. part of landing area.
 21. CANTIERE, $39^{\circ}55'00''$ E., $17^{\circ}52'00''$ E. 2 1/2 mi. NW of Ossuna. 24 mi. N of the Cesena/San Giovanni In Pianura road. Roughly rectangular strip, 1000 yds NW/SE 1000 yds. 3 hangars NW corner, dispersal areas S. of bndry, a wood NW of the bndry may also be used for dispersal; Concrete runway measuring NW/SE 1100 yds across the S. part of landing area.
 22. CANTIERE, $39^{\circ}55'00''$ E., $17^{\circ}52'00''$ E. 7 mi. SW of Ossuna. 1 small hanger on NW. 1000 yds NW/SE 1000 yds. Flat ground, probably w/u after rain. Shops and bldgs to E. Admin bldg in SW corner. Dispersal area to SW.
 23. CANTIERE, $39^{\circ}55'00''$ E., $17^{\circ}52'00''$ E. 2 mi. S. of Ossuna. The L/G is a narrow strip 100 yds wide, being irregular in shape and has been extended to 1600 yds N-S & 1500 yds E-W. There are 5 hangars (one with a concrete apron) along with other w/shops, stores and barracks. Later photography shows a perimeter track u/c along the N-S and E-S boundaries. There is a dispersal area with 6 a/c shelters, and along the W a dispersal area with 7 a/c shelters.
 24. CANTIERE/PIRELLI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. Approximately 1 1/2 mi. S. of Crotone/Barra Lago. 101 mi. SW. of Crotone. Roughly rectangular areas. 1100 yds NW/SE x 600 yds NW/SE. Grass surface firm & level. No organised dispersal and no facilities visible.
 25. CANTIERE, see CAVATRI.
 26. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 2 mi. S. of Poggio. The L/G is approximately 1750 yds NW/SE x 600 yds SW. Flat ground, probably w/u after rain. Shops and bldgs to E. Admin bldg in SW corner. Dispersal area to SW.
 27. CAVATRI/PIRELLI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 6 mi. NW of Poggio. The landing strips are in the form of an "L". The strip running along the N. of the L/G is approx. 1100 yds NW/SE x 100 yds in width; on the W side of the L/G is the upright stroke of the "L" being NW - SSW 2200 yds and NW/SE 2000 yds. Work on the runway is at a standstill at present, there are no facilities. Two lots of barracks along the S. bndry of the Western half of the L/G. 1 dispersal area with 6 a/c shelters, and along the E a dispersal area with 5 a/c shelters.
 28. CAVATRI/PIRELLI, see CAVATRI.
 29. CAVATRI/PIRELLI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 6 mi. NW of Poggio. The landing strips are in the form of an "L". The strip running along the N. of the L/G is approx. 1100 yds NW/SE x 100 yds in width; on the W side of the L/G is the upright stroke of the "L" being NW - SSW 2200 yds and NW/SE 2000 yds. Work on the runway is at a standstill at present, there are no facilities. Two lots of barracks along the S. bndry of the Western half of the L/G. 1 dispersal area with 6 a/c shelters, and along the E a dispersal area with 5 a/c shelters.
 30. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 20 mi. S. of Poggio. 3 mi. inland from the Gulf of Manfredonia. Length of strip NW/SE 1750 yds width at present 450 yds approx. Grass surface probably damp; bldgs at NW. and probably used as HQ. Dispersal in open fields extending over an area of 2 mi. Westward.
 31. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 13 mi. SW of Poggio; of Foggia. 6 mi. NW of Poggio. 1200 yds NW/SE 800 yds. 5 hangars with terrace aprons at the N end of the town. Admin bldg to E. and N. of hangars. Probably used for flying training.
 32. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 14 mi. S. of Bovino emergency L/G. Rectangular strip NW/SE 1100 yds NW/SE 250 yds. Levelled agricultural land. Farm bldgs near E. Admin bldg to E. and N. of hangars. Probably used for flying training.
 33. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 3 mi. NW of Poggio. The L/G is approximately 1750 yds NW/SE x 600 yds SW. Flat ground, probably w/u after rain. There is a smaller L/G 100 yds SW. The NW corner of the L/G is a dispersal area immediately SW of the main L/G; a space of 1000 yds square is being cleared for an additional L/G area, this is also separated from the main L/G by a wide river. No runways, surface grass; 2 medium hangars on NW bndry. w/shop NW of hangars. An area parallel to the main L/G area is used for dispersal and equipped with 5 large blast shelters with a further 3 u/c.
 34. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. On the W. coast of Italy 25 mi. NW of Rome, between the Roma/Pisa RR and the sea. Landing area of main L/G is approx. 1100 yds NW/SE x 600 yds, there is a smaller L/G 100 yds SW. The NW corner of the L/G is a dispersal area immediately SW of the main L/G; a space of 1000 yds square is being cleared for an additional L/G area, this is also separated from the main L/G by a wide river. No runways, surface grass; 2 medium hangars on NW bndry. w/shop NW of hangars. An area parallel to the main L/G area is used for dispersal and equipped with 5 large blast shelters with a further 3 u/c.
 35. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 3 mi. NW of Poggio. The L/G is approximately 1750 yds NW/SE x 600 yds SW. Flat ground, probably w/u after rain. There is a smaller L/G 100 yds SW. The NW corner of the L/G is a dispersal area immediately SW of the main L/G; a space of 1000 yds square is being cleared for an additional L/G area, this is also separated from the main L/G by a wide river. No runways, surface grass; 2 medium hangars on NW bndry. w/shop NW of hangars. An area parallel to the main L/G area is used for dispersal and equipped with 5 large blast shelters with a further 3 u/c.
 36. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 3 mi. S. of Reggio Di Calabria, RR to E. to Noto to S. of Poggio. 1200 yds NW/SE 100 yds. 1 Admin bldg on E. bndry. New dispersal to the S., much recent bomb damage.
 37. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & station bldgs in S. corner.
 38. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 39. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 40. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 41. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 42. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 43. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 44. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 45. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 46. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 47. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 48. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 49. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 50. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 51. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 52. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 53. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 54. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 55. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 56. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 57. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
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 60. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$ E. 4 mi. SW of Poggio. 1200 yds NW/SE 100 yds. 2 hangars & terrace apron in S. corner. Admin bldg on E. bndry.
 61. CAVATRI, $39^{\circ}55'00''$ E., $17^{\circ}51'00''$

COMMANDER U.S. NAVAL FORCES

NORTHWEST AFRICAN WATERS

ARMY A - AVALANCHE

ENEMY STRENGTH

MINE-FIELDS

Attention is directed to British naval QB messages for current information on mine-fields.

Mining in shallow water off the beaches with land mine types as protection against landing craft is within enemy capabilities. It may be expected, however, that the principal enemy mining effort will be with influence (magnetic and acoustic) and contact mines, laid further out.

The waters in the northeastern part of the GULF OF SALERNO are mineable out to a distance of approximately six miles. The whole of the southeastern portion of the gulf is mineable.

An old report, graded D.O., of 1941, states that three mine-fields extend half a mile each side of lines joining

- (a) $40^{\circ} 42' 30''$ N, $14^{\circ} 59' 22''$ E to $40^{\circ} 38' 30''$ N, $13^{\circ} 59' 22''$ E,
- (b) $40^{\circ} 41' 16''$ N, $14^{\circ} 03' 00''$ E to $40^{\circ} 37' 14''$ N, $14^{\circ} 08' 30''$ E,
- (c) $40^{\circ} 39' 15''$ N, $14^{\circ} 12' 25''$ E to $40^{\circ} 33' 40''$ N, $14^{\circ} 12' 25''$ E.

COMMANDER U.S. NAVAL FORCES

NORTHWEST AFRICAN WATERS

ANNEX A - AVALANCHE

ENEMY STRENGTH

RADAR (British: R.D.F.)

1. Types of German radar

a. FREYA

Long range early warning stations which can pick up an aircraft at 10,000 ft about 140 miles away. They can pick up shipping at a distance of 30 to 40 miles when installed 200 ft above sea level.

b. Giant WURZBURG

Used for day and night fighter control (British: G.C.I.). These stations have a maximum range of about 45 miles, operate on the narrow beam principle, and work in conjunction with FREYA stations. They can pick up shipping at a distance of about 30 miles when installed 200 ft above sea level.

c. Surface watching

These stations give range and bearing, have a maximum range of about 40 miles, and can detect small landing boats.

2. Location of radar stations NAPLES - STRAITS OF MESSINA area.

No definite information is available at the time of writing. It is believed that there is a FREYA station in the ISCHIA - POZZUOLI - NAPLES area, one in the CAPRI - SORRENTO - AMALFI area, and a third on PUNTA LICOSA. Two surface watching stations are reported to exist between NAPLES and the Straits, one in the NAPLES area. There are probably two WURZBURG stations in the NAPLES - Straits area.

17 Aug. 43

Capt. Lewis

ANNEX A - AVALANCHE

BEACH REPORT

MINOR BEACHES ON SOUTHERN COAST OF SORRENTO PENINSULA

The terrain of this part of the coast - from PUNTA CAMPANELLA to SALERNO - is rugged and mountainous, rising steeply to a crest at elevations of 500 meters or more within a mile of the shore near the southwestern point of the peninsula, and rising to more than 4600 ft. on MONTE SAN ANGELO TRE PIZZI northeastward of POSITANO. The main highway from CASTELLIAMMARE DI STABIA, which cuts across the peninsula about halfway between PUNTA CAMPANELLA and CAPO SOTTILE, runs close to the shore northeastward to POSITANO. However, it is laid some distance above the shore along this steep and rocky coast. No important streams drain this area, but the slopes are deeply riddled by the valleys of intermittent streams.

POSITANO (GSGS 4229, Sheet 197 IV, 405249-415250)

The offshore approach is obstructed by SCOGLIO VIVARO, a rounded islet about 1 mile from the coast southwest of PUNTA SAN ELIA, and eastward of SCOGLIO VIVARO are shoals with depths of 21 and 18 ft. A short distance eastward of these shoals are the islets of LI GALLI, the largest of which is surmounted by a tower. The 30 ft. line lies very close to the main coast.

Anchorage for small vessels in 200-300 yds. offshore at POSITANO, on sand bottom. The bottom is sand and rock in the near-shore region and mud in deeper water. The anchorage is hazardous during fresh winds from seaward.

The prevailing winds are mainly from the western quarter, owing in part to the protection of the peninsula. Waves approach mainly from the southern and southwestern quarters. The offshore current is generally to the southwest parallel to the shore, but is variable and subject to the influence of the winds. Tides are negligible.

The town of POSITANO is built at the mouth of a wide valley which opens as an amphitheater between two mountains. A church with a yellow belfry dominates the houses on the beach.

There are two small beaches of sand and shingle, separated by cliffs. In each case there is a bank of gravel down to the foreshore. The westerly beach is 200 yds. long with maximum depth of 40 yds and the easterly beach 250 yds. and 40-60 yds. deep. The beach surface is moderately firm and the gradient is about 1:5 to 1:10.

EXITS are afforded only by narrow winding roads in part passing through the town to join the main highway which parallels the coast above the town. Not suitable for vehicles.

The beach could be used with any type craft but its small size and poor exits make it suitable only for small infantry landings.

DEFENSES: No defenses are known to exist in the vicinity of POSITANO.

AMALFI (GSGS 4229, Sheet 197 IV, 505255-512257)

AMALFI is an artificial harbor 1 3/4 miles northeast of CAPO DI CONCA. TORRE DEL ZIRO is an isolated, circular tower at an elevation of 630 ft. on a rocky spur northeast of town.

The offshore approach to this stretch of coast is clear to the 30 ft., which generally closely hugs the shore, but in the vicinity of AMALFI and northeast it lies about 800-1000 ft. offshore. Bottom is mainly sand inshore and mud in deeper water.

The entrance to the harbor faces south-east. The harbor is formed by a mole 760 ft. long, extending east-south-east from the shore at the west end of town. The mole is composed of rough blocks of stone on outer side but quayed on the inner side. This quay, which is only about 14 ft. wide has direct road access into the town.

The depths alongside are 10-13 ft.

BEACH. Northeast of the root of the mole there is a beach about 125 yds. long with a few scattered rocks at the water-line. This beach, about 20 yds. wide and with a slow water gradient about 1:18, was used for hauling up small boats. It is backed by a wall and road.

From the east end of the beach the shore is bordered by rocks and rough masonry blocks for 270 yds. to a short stone jetty, which is the east end of the harbor. This jetty is about 160 ft. long and quayed on its west side. Depth at its head is about 13 ft. and it was used as alongside berths for small local craft.

East of the jetty and outside the harbor, there is 120 yds. of rock banked wall and the bathing beach of the town. Length 185 yds., with width about 20 yds. gradient 1:15. The beach is of fine sand and is backed by a high and almost vertical stone wall.

Any type landing boats and craft could beach on these small beaches but exit for other than light vehicles would be impracticable.

DEFENSES: There are no known defenses in the vicinity of AMALFI.

MINORI (GSGS 4229, Sheet 197 IV, 529275-531275)

Sea approach clear. TORRE D'AMALFI and CAPO D'ORSO should be suitable land marks for approach. MINORI is separated from MINORI by a short headland.

At MINORI is a pocket beach set in from the rugged coast. The beach is about 270 yds. long and about 30 yds. wide. The beach is backed by the town immediately in front of which runs the main highway, nearly at beach level. A stream - canalized - flows over the beach 80 yds. from the western end.

The gradient is moderate and considered suitable for landing boats, LCI and LCT.

EXITS good for personnel and probably with slight preparation for vehicles and tanks direct onto the coast road.

MAIORI - only 450-500 yds. eastward of MINORI is about 1100 yds. long and 30-50 yds. in width.

The beach is a mixture of soft sand and gravel. Five small streams trickle over the beach, 3 in the western half, 1 in the center (the largest) and 1 in the eastern half.

From the western end to 100 yds. beyond the center stream the beach is separated from the coast road by a low wall. From 100 yds. East of the center stream to the eastern end the road rises on a ramp.

Inland of the coastal road is the town of MAIORI. The terrain inland is mountainous rising steeply to elevations of 500 to 1000 meters within a short distance of the shore. The gentler inland slopes are cultivated with vineyards and olive groves. The valley inland from MAIORI is followed by a paved highway which crosses the mountains and descends to the plain behind CASTELLAMARE DI STABIA.

The gradient of MAIORI beach is moderate and should be suitable for landing boats, LCI and LCT.

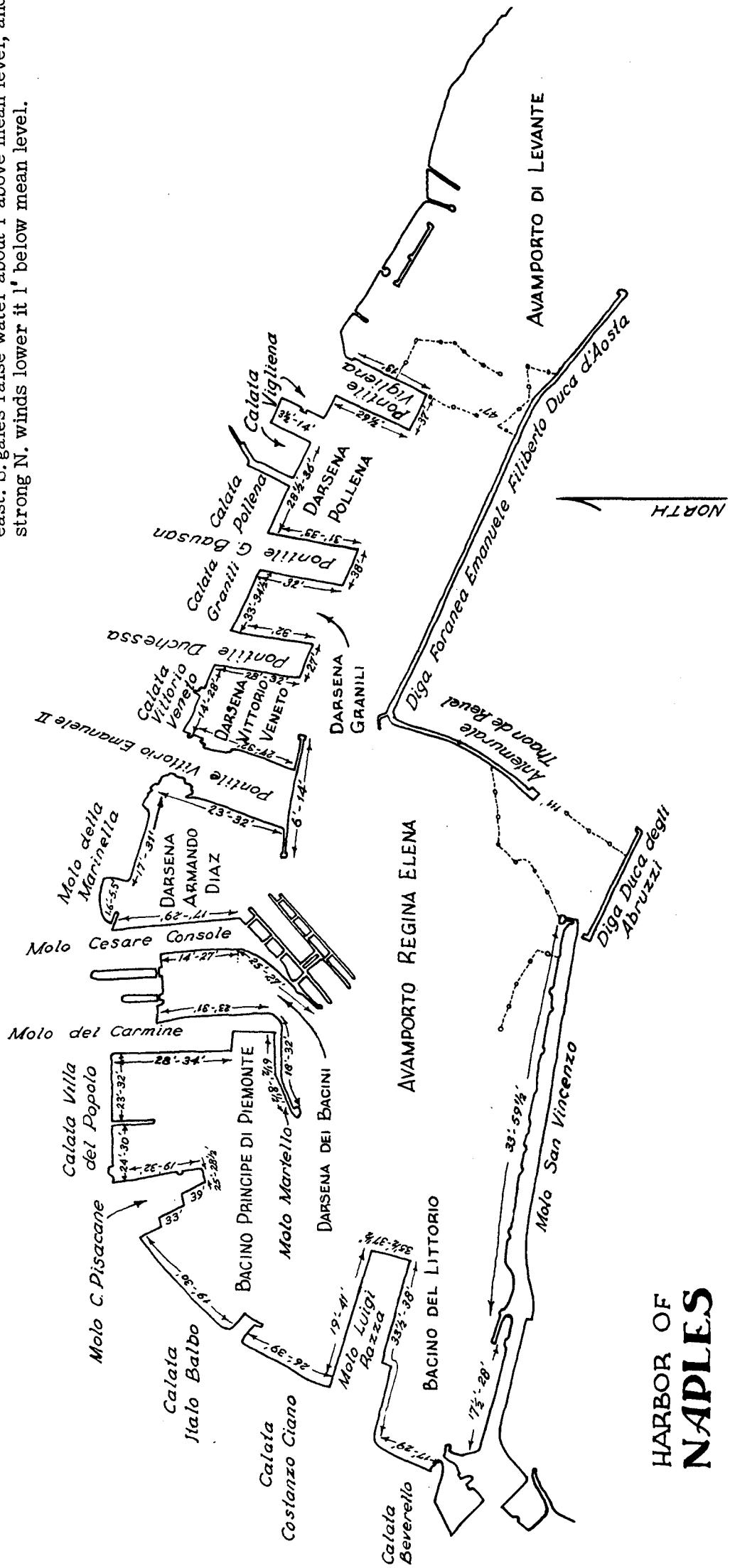
EXITS are directly on to the coastal road, with paved road through the town and up the valley described above, and the coastal highway eastward 5 miles to SALERNO.

DEFENSES: There are no known defenses in the vicinity of MINORI and MAIORI.

LANDMARKS. Approaches to the GULF OF NAPLES are flanked on the N. by the islands of ISCHIA and PROCIDA, and on the S. by the island of CAPRI. Once in the bay, the most prominent landmark is MT. VESUVIUS.

ANCHORAGES: Ample protected anchorage space in deep water within harbor over mud bottom.

min. It is believed there are no appreciable currents in and out of harbor entrance. The MONTANARI CUR- RENT which is general along W. Coast of ITALY sets to NW. This current enters BAY OF NAPLES from CAPE MISENO touching CAPE POSILLIPO, and circles BAY OF NAPLES clockwise past NAPLES from west to east. S. gales raise water about 1' above mean level, and strong N. winds lower it 1' below mean level.



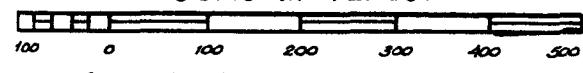
HARBOR OF NAPLES

HARBOR OF

GAETA

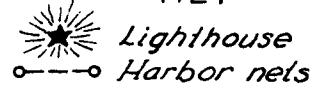
41°-13' N
13°-35' E

Scale in Yards:



Approximate depths in Fathoms.

KEY



LANDMARKS: Capuchin Convent SW of PUNTA MULINO. TORRE ORLANDO on high promontory. 825 meters S. of foot of MOLO S. ANTONIO.

TIDES & CURRENTS: Lunar tides are negligible. During S. winds, a seagoing current sets along W. side of port. When wind veers to NW, current sets N.

ANCHORAGES: Except near PUNTA STENDARDO, safe anchorage in fair weather over stiff mud bottom at any point outside 5 fathom line.

NORTH ↑

Small ship repair yard

NAVAL BASIN

Pontile Ciclano

Refueling jetty

pia. S. Antonio

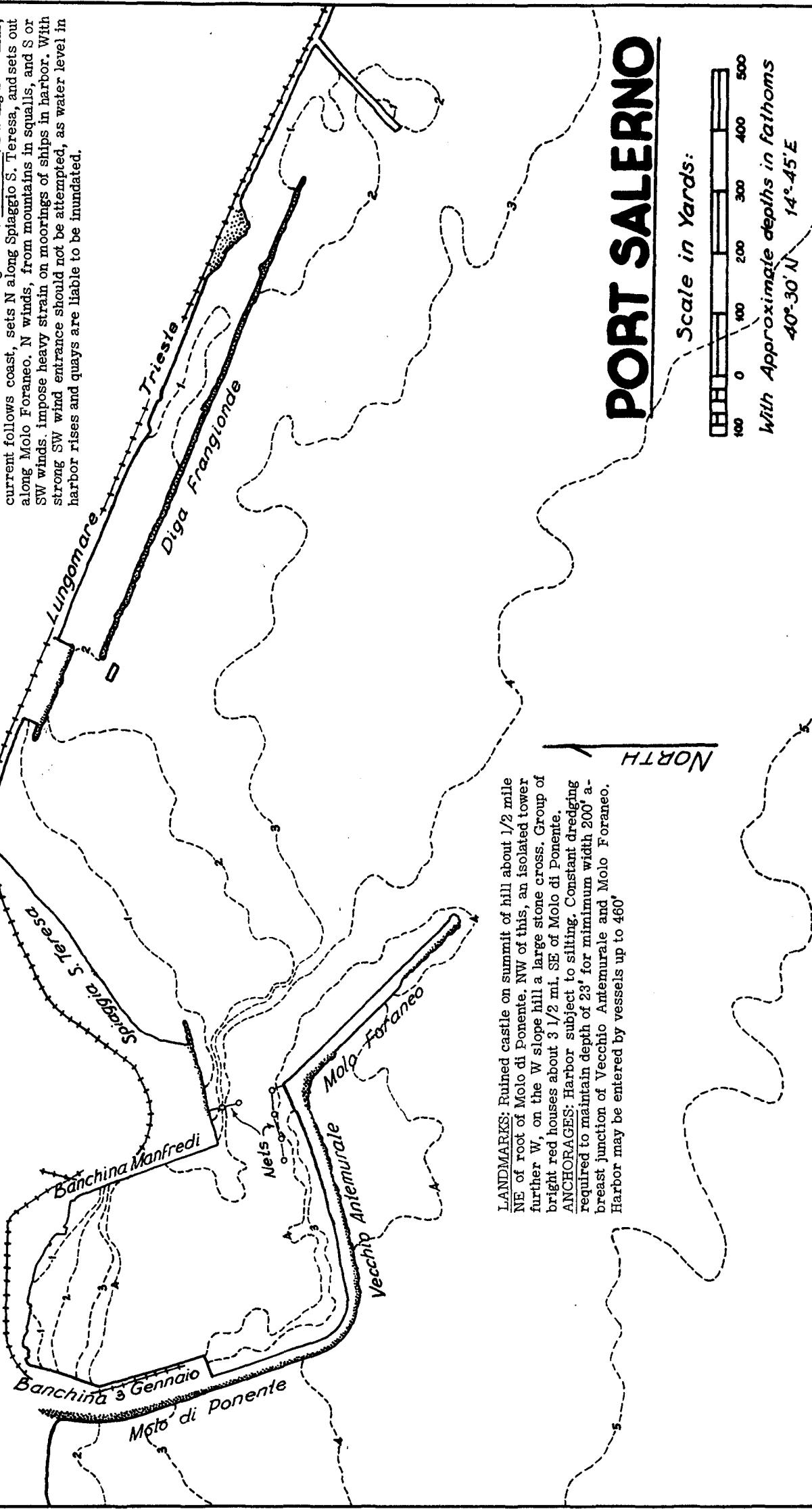
Town Hall

Torre Orlando

pia. Stendardo

Oil Tanks Wall
Chimney

TIDES AND CURRENTS: Tides - only small range. High tide almost uniform and simultaneous along coast. Currents: During SW winds, current follows coast, sets N along Spiaggia S. Teresa, and sets out along Molo Foraneo. N winds, from mountains in squalls, and S or SW winds, impose heavy strain on moorings of ships in harbor. With strong SW wind entrance should not be attempted, as water level in harbor rises and quays are liable to be inundated.



PORT SALERNO

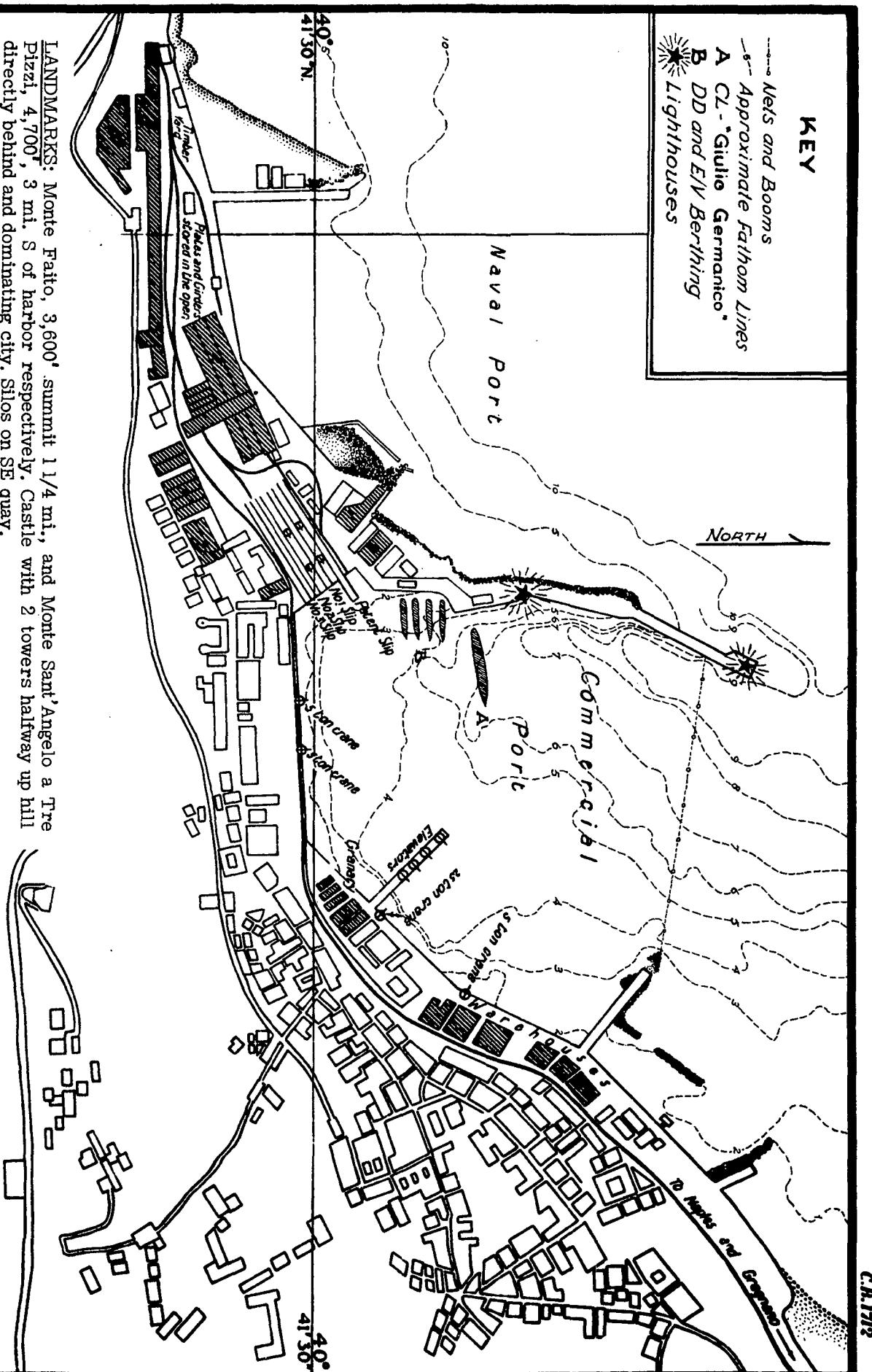
Scale in Yards:

With Approximate depths in fathoms
40°-30' N 14°-45' E

LANDMARKS: Ruined castle on summit of hill about 1/2 mile NE of root of Molo di Ponente. NW of this, an isolated tower further W, on the W slope hill a large stone cross. Group of bright red houses about 3 1/2 mi. SE of Molo di Ponente.
ANCHORAGES: Harbor subject to silting. Constant dredging required to maintain depth of 23' for minimum width 200' a-breast junction of Vecchio Anfiteatro and Molo Foraneo.
Harbor may be entered by vessels up to 460'.

KEY

- Nets and Booms
- Approximate Fathom Lines
- A CL - "Giulio Germanico"
- B DD and E/V Berthing
- Lighthouses



8
March
1942

LANDMARKS: Monte Faito, 3,600' summit 1 1/4 mi., and Monte Sant'Angelo a Tre Pizzi, 4,700', 3 mi. S of harbor respectively. Castle with 2 towers halfway up hill directly behind and dominating city. Silos on SE quay.

ANCHORAGES: In summer vessels can anchor near head of W mole in 9 to 10 fathoms, mud, good holding ground. Harbor will accommodate ships up to 24' draught with normal weather. Single screw vessels to 425', twin screw to 490'.

TIDES AND CURRENTS: Tides - Up to 12'. Most fluctuation caused by strong winds.

Currents - Sea strong with W-SW winds. With SE winds, squalls from mountains, endangering vessels secured to W mole. Anchorage NW of this mole untenable with strong winds S through W, to NW. Current usually is N during SW and onshore winds.

CASTELLAMARE DI STABIA

PLAN OF PORT

Scale of Yards

000 0 100 200 300 400 500 yards

Corrected August, 1943

Capt. Lewis

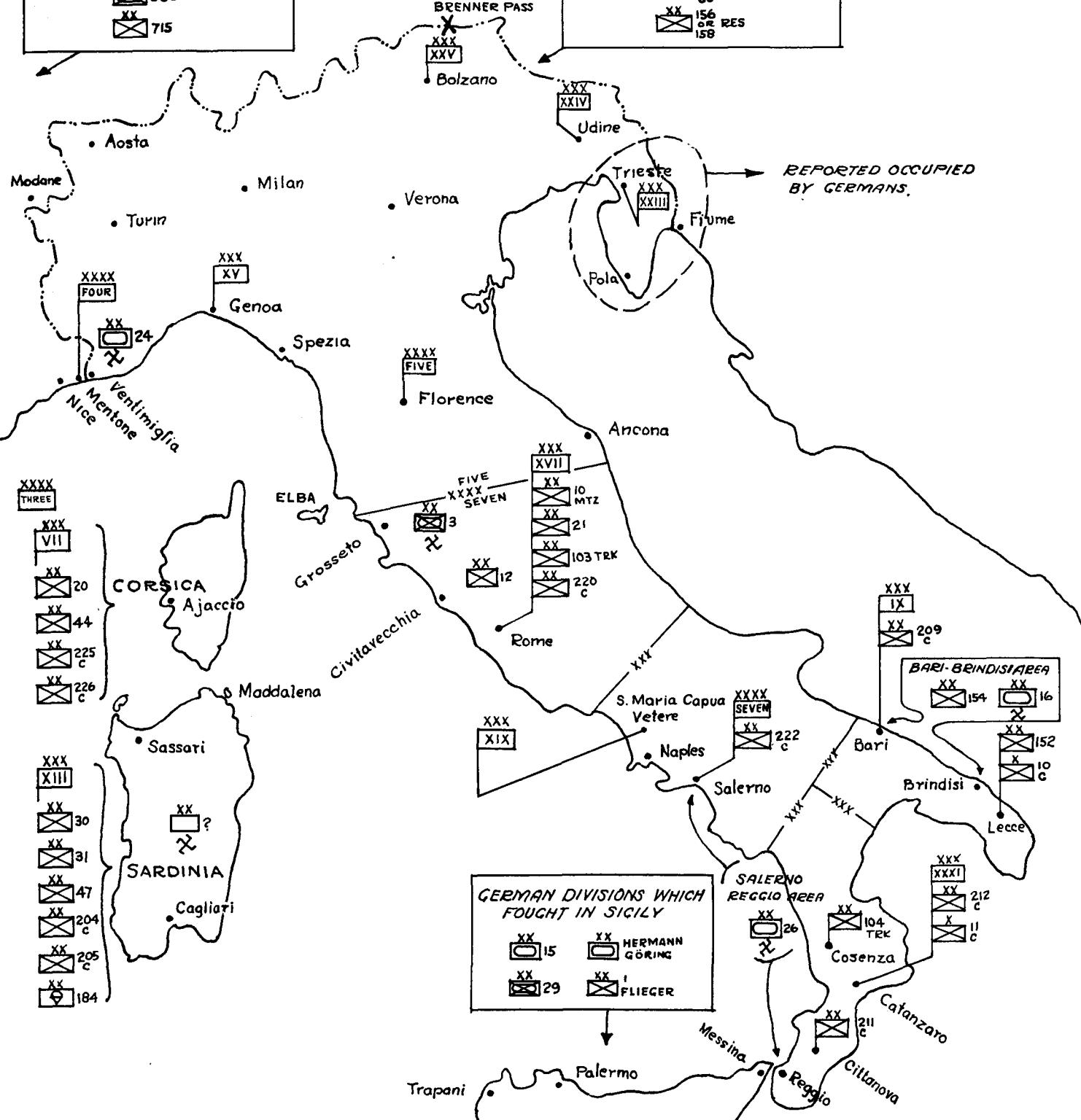
AXIS GARRISON IN S. ITALY, SARDINIA, AND CORSIGA

GERMANS IN S.E. FRANCE
INTENDED FOR ITALY.

XX 386
XX 715

GERMANS UNLOCATED
IN N. ITALY.

XX 2 OR 60
XX 156 OR RES
158



LEGEND

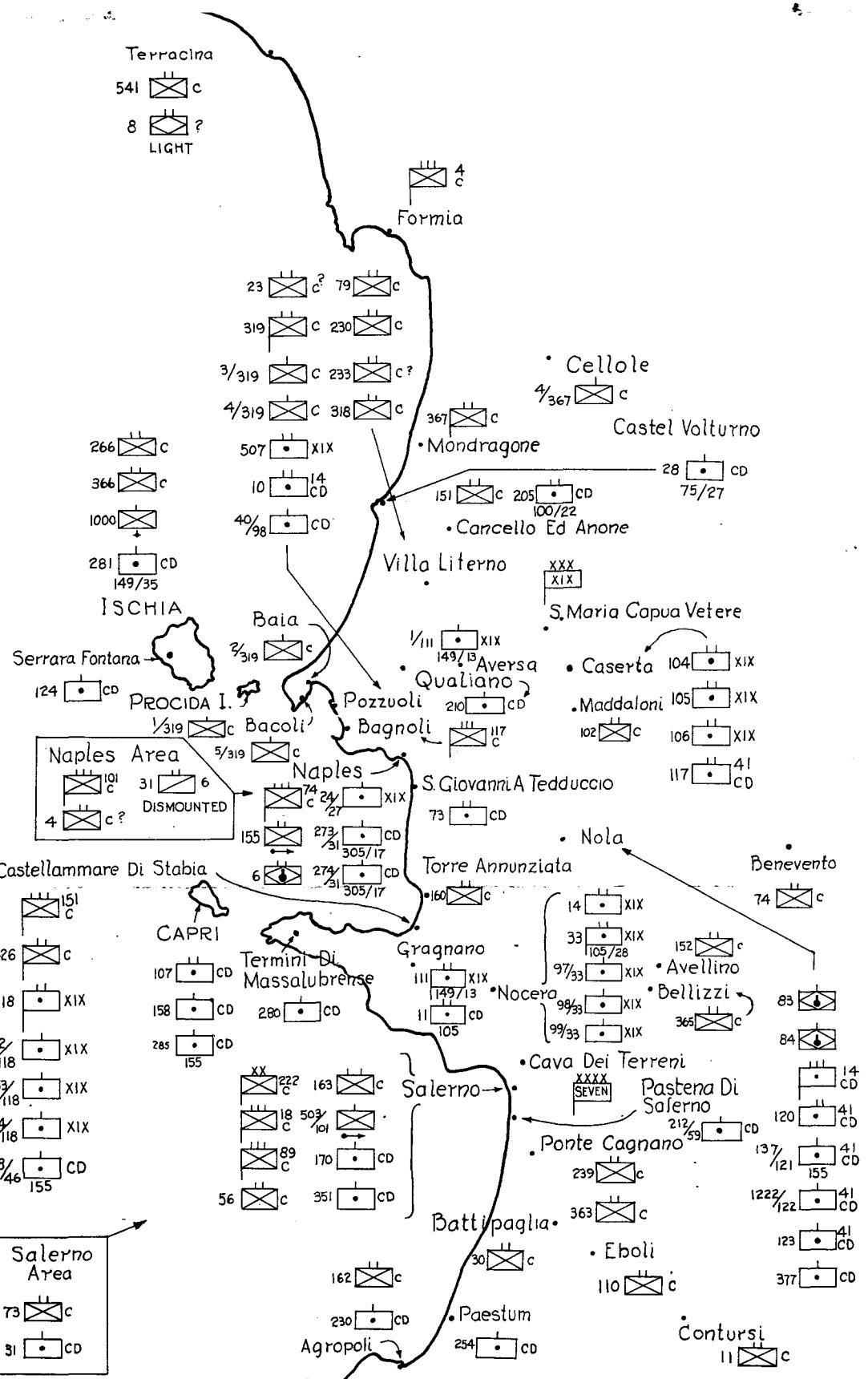
XXXX HQ, SEVENTH ARMY
XXX HQ, XIX CORPS
XX INFANTRY DIVISION
XX PARACHUTE DIVISION

XX ARMORED DIVISION
XX ARMORED INFANTRY DIVISION
X II C HQ, 11TH COASTAL BRIGADE

ABBREVIATIONS:
MTZ = MOTORIZED
TRK = TRUCK-BORNE
C = COASTAL
RES = RESERVE
X = GERMAN UNIT

BOUNDARIES:
— XXX — = ARMIES
— XXX — = CORPS

AXIS GARRISON GAETA-NAPLES-SALERNO AREA



LEGEND

HQ, 151 ST COASTAL REGT	83 ^d AT CO	1000 TH MORTAR CO
8 TH TANK BN	281 ST CD ARTY BTRY (149/35 GUNS)	31 ST SQUADRON, 6 TH CAV REGT
	503 ^d CO OF 101 ST MG BN	

COM INTELL U.S. NAVAL FORCES

NORTHWEST AFRICAN WATERS

APPENDIX A - AVALANCHE

SUPPLEMENT NO. 1

ENEMY STRENGTH - Ground Forces

203mm guns have been reported on PUNTA LICOSA. They have not been found, however, on existing photographic cover.

There is a 4 gun unoccupied dual purpose battery at N 721942. It is shown on the collation map (sheet 171 IV), but is not shown on the index map of coast defense batteries.

The index map of coast defense batteries issued by this headquarters should be used for plotting positions for shore bombardment by gunfire support ships in the GAETA-NAPLES-SALERNO area.

To the north and south of N 836024 there is evidence of land mines along the beach just inland from the water's edge. Oblique photographs confirm the existence of barbed wire initifs area on the inland side of the beach. The land mines are believed laid in order to protect gaps in the wire.

Two recent photographic sorties of the ISOLE PONTINE reveal NO trace of defenses of any kind, except Radar installation noted below.

The dual purpose battery at N 707254 is now occupied. At least 2 guns are in position, extremely well camouflaged.

ENEMY STRENGTH - Air Forces

New landing grounds within approximately 110 miles of GAETA and SALERNO Gulfs reported since August 15, 1943:-

<u>Landing Ground</u>	<u>Activity</u>
Spezzano/Albanese 39° 43' N, 16° 15' E	1 a/c - 8/21
Foggia Satellite # 10 41° 38' N, 15° 25' E	20 SE Fighters 8/20
Foggia Satellite # 11 41° 30' N, 15° 25' E	3 a/c - 8/22
Capanne 41° 38' N, 12° 28' E	4 Ju 52's - 8/16
Grazzanise Satellite # 1 41° 05' N, 13° 59' E	31 SE Fighters - 8/13
Palidoro No. 1 41° 56' N, 12° 09' E	No a/c 8/18
Palidoro No. 2 41° 56' N, 12° 10' E	No a/c 8/18

ENEMY STRENGTH - Radar

A FREYJA type radar installation has been observed on VENTOTENE Island 1,500 yards 237° from the Leading Lights at the northeastern extremity of the island; $40^{\circ} 47.4' N$, $14^{\circ} 25.4' E$ on charts E.0324 and F.0859. This is 513433 on G.S.G.S. 4164, Sheet 170.

A FREYJA installation is reported on CAPE MISENO, NAPLES, as well as one on PUNTA LICOSA.

26 Aug 43

~~SECRET~~

File No.
A4-3/N25
Serial: 00494

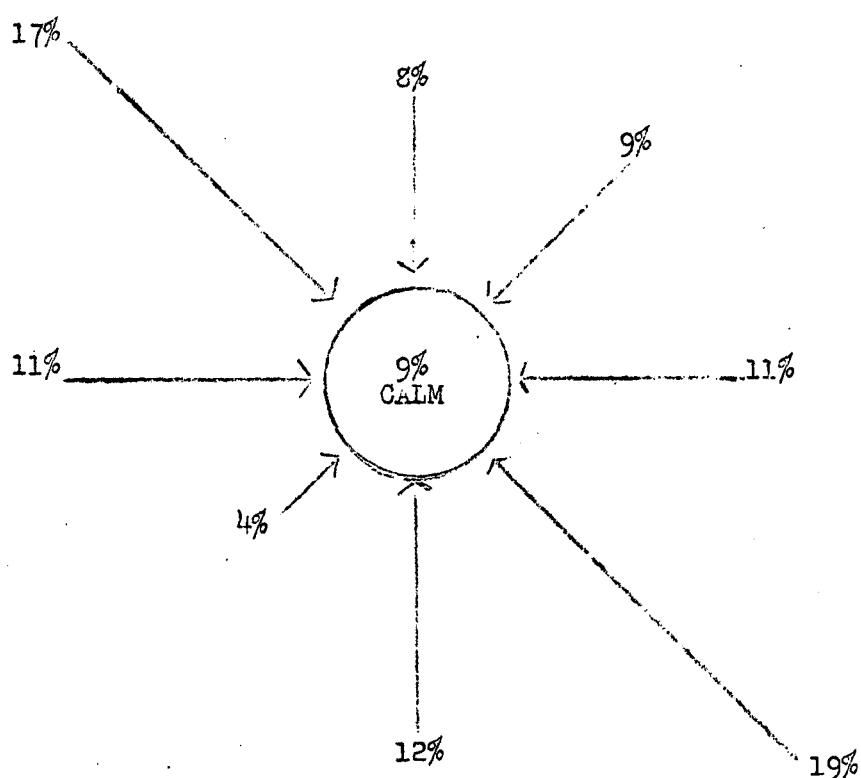
APPENDIX I to ANNEX A,
Commander Western Naval Task Force
Operation Plan No. 7-43

WEATHER SUMMARY

SUMMARY OF CLIMATIC CONDITIONS

Ocean Area 40° N - 45° N, 10° E - 15° E

SEPTEMBER



Average Frequency of Wind Direction

Mean Wind Velocity 5.7 knots

Average percent of observation recording:

(a) Haze	5 %
(b) Mist	3 %
(c) Fog	3 %
(d) Drizzle	0 %
(e) Rain	0.5%
(f) Showers	3 %
(g) Thunderstorms	3 %
(h) Heavy Squalls	0 %
(i) Gales (Force 7 or Greater)	1 %
(j) Exceptional Visibility	6 %

Mean Cloud Amount (Overcast = 10) 3.8

NOTE: Breaking waves on landing beaches may reach 5 to 9 feet, but rarely. (Statistical odds about 50 to 1 against).

WEATHER SUMMARY

1. GENERAL

This summary covers the Southwest coast of Italy and its approaches from the west during the month of September.

Conditions at this time are generally very favorable for landing operations. It is estimated that the statistical odds against the occurrence, on a given September day, of weather and sea conditions which might present serious hazard to beach landings, are about 50 to 1.

2. RAINFALL

Annual rainfall in the coastal region is approximately 33 inches occurring on 112 days during the year. (Compare with Seattle which has 34 inches occurring on 151 days during the year). Average fall during September is 2.9 inches with only 7 rainy days during the month. Rain during this period is largely showery in character and of short duration.

3. WIND

Winds are usually light or moderate during September. Northwest and Southeast directions predominate somewhat, but winds from all quarters are to be expected. The familiar land and sea breezes typical of coastal regions in summer still occur in September but with decreasing frequency and strength. Gales (with velocities greater than 28 knots) occur on 1% of September days and are usually from Northwest.

The Scirocco may be expected here at this time of year. It brings hot, sultry Southerly wind usually with overcast sky, low clouds and some light rain. Occasionally but not usually, these winds may become strong and may attain gale force.

Land squalls near the coast in the vicinity of high cliffs and mountains are encountered at times. They are very local in nature and of short duration but may develop to gale force on some occasions.

4. TEMPERATURE

Character of the air temperature during September is best shown by the following table, all temperatures Fahrenheit:

Extreme Maximum	93
Mean Daily Maximum	77
Mean Daily Minimum	65
Extreme Minimum	48

The sea surface temperature is about 73° F in the Tyrrhenian Sea during September.

5. VISIBILITY

Visibility is usually from 2-10 miles. Fog occurs on about one day per month and then nearly always in the early morning, dissipating by 0930 local time. Visibilities are reduced to $\frac{1}{2}$ - 2 miles on 6 or 7 days during the month and on these days there is nearly always rapid improvement in the late forenoon and afternoon.

6. CLOUD COVER

Average cloudiness during September is 3 to 4 tenths of the sky covered. Periods of maximum cloudiness occur in the early morning and in the evening, with overcast conditions developing at these times about 8 days per month. Overcast conditions throughout the day are rare.

7. CONDITIONS FOR LAYING SMOKE

Weather conditions are generally favorable for laying smoke during September, particularly in the early morning and at night. Smoke persistence becomes less, as a rule, when solar heating during the day produces vertical air currents which tend to dissipate smoke into the atmosphere. Light or moderate winds are usual, but they may be anticipated from any quarter.

File
A4-3/90

Serial: 00494

ANNEX "B" TO OPERATION PLAN NO. 7-43

GUNFIRE SUPPORT PLAN

AVALANCHE

Task Organization

(a) NORTHERN Fire Support Group
Units assigned by Commander NORTHERN Attack Force.

(b) SOUTHERN Fire Support Group
Units assigned by Commander SOUTHERN Attack Force.

1. Information.

(a) See Annex A, Characteristics of theater and enemy strength.

(b) The following material of special interest in planning gunfire support, will be distributed in quantity.

(1) Collation maps, scale 1/50,000 or 1/25,000 with defenses overprinted. These maps will cover entire area.

(2) Beach sketches, with defenses overprinted in red. These sketches will cover only the area of the SOUTHERN Attack Force.

(3) Battery sketches, which are direct tracings of late aerial photographs, of all CD and DP batteries in the GULF of SALERNO area and of all principal CD batteries in the GULF of NAPLES and GULF of GAETA areas. A 1/250,000 index map of all CD and DP batteries in the entire area will also be furnished.

(4) Nine gridded charts, of varying scale, covering the GULF of SALERNO and GULF of NAPLES area. These are numbers F 0643, F 0645, F 0646, F 0650, F 0651, F 0654, F 0653, F 0655, F 0394.

(5) Topographical maps of the entire area, scales 1/25,000, 1/50,000, 1/100,000, and 1/250,000. The 1/25,000 and 1/50,000 series do not cover the entire area.

(c) The British Grid System (Blue) will be used for the purpose of Naval gunfire.

(d) Forward Observation Officers and Naval Gunfire Liaison officers assigned by NORTHERN Attack Force and SOUTHERN Attack Force Commanders.

(e) List of numbered gunfire targets will be distributed separately as Appendix 1 to Annex B.

(f) Gunfire support areas shown in Appendix 2 to Annex B which will be distributed separately.

2. Fire Support Groups will furnish required Naval Gunfire Support in order to assist troops in landing and in advancing to prescribed objectives.

File
A4-3/90
Serial: 00494

BIGOT-AVALANCHE
ANNEX B to
OPERATION PLAN
NO. 7-43

3. (a) NORTHERN Fire Support Groups.
- (b) SOUTHERN Fire Support Groups.
 - (1) Execute fire support missions as directed by Gunfire Support Plan of Attack Force Commanders.
 - (2) Prearranged targets, schedules of fires, and sectors of responsibility will be as directed by Gunfire Support Plan of Attack Force Commanders.
- (x) (1) Forward Observation Officers and Shore Fire Control Parties furnish adequate definition of targets on which fire has been requested. Inform fire support ships position of own front lines, type of target, type of fire required, and proposed movements of own troops.
 - (2) Do not open fire before H-15 unless directed by Attack Force Commanders.
 - (3) Keep Attack Force Commanders informed of targets under fire.
 - (4) Expend ammunition with caution in view of limited quantities carried. Do not employ rapid fire for more than one minute without correcting range and deflection.
 - (5) United States ships will use ration of Mark 32 fuzed projectiles as established by Unit Commanders during air attack. Do not use Mark 32 fuzes when any portion of trajectory will be within 1000 yards of own forces or own troops ashore.
 - (6) If star shells are employed, fuzes will be set to burst at least 2,000 yards inland from the assault beaches.
 - (7) Be guided by the following general principles:
 - (a) Destroyers, LCGs, Gunboats support and cover the landing. Maintain element of surprise as practicable. Provide close supporting fire using main battery and machine guns against enemy batteries, beach defenses, and searchlights which endanger the landing. When directed, take station in assigned fire support area. Furnish fire support missions as requested by Shore Fire Control Parties and Forward Observation Officers.
 - (b) Cruisers. Maintain element of surprise as practicable. Take station in fire support area designated. Execute counter-battery fire and fire on prearranged targets and targets of opportunity as directed by Attack Force Commanders. After landing execute counter-battery fire on enemy batteries opposing our effort, which can be engaged without endangering own troops. After daylight, execute fire support missions as requested by Troop Commanders through Shore Fire Control Parties, or Forward Observation Officers. For indirect fire use Shore Fire Control Party or Forward Observation Officer Spot.

File
A4-3/90
Serial: 00494

~~RECORDED~~
ANNEX B to
OPERATION PLAN
NO. 7-43.

- (c) Monitors. Take station in assigned fire support areas. When directed execute fire support missions as directed by Attack Force Commanders. Use Shore Fire Control Party and Forward Observation Officer Spot.
- (d) LCR's. Provide close support for assault wave as directed by NORTHERN Attack Force Commander.
- (e) LCF's. Provide anti-aircraft defense for assault beaches as directed by NORTHERN Attack Force Commander.
- (8) Fire Support Group Commanders may direct a shift from a prearranged target to a target of opportunity.
- (9) Use smoke or white phosphorus projectiles as directed by Attack Force Commanders.
- (10) In the event of enemy air, surface, or submarine attack on the Fire Support Groups or the transport areas, shore bombardment will be reduced as necessary to repel attacks. Information will be radioed in the clear to the Shore Fire Control Parties and Forward Observation Officers.
- (11) Attack Force Commanders will interchange fire support destroyers and screening destroyers as warranted by expenditures of ammunition and depth charges.
- (12) When expenditures of ammunition reaches 50% of total type allowance for caliber, notify Attack Force Commanders. Attack Force Commanders report daily ammunition expenditures and ammunition remaining in each fire support ship commencing at noon D plus one to Commander Western Naval Attack Force.
- (13) Projectiles not fitted with base or point detonating fuzes will be time fuzed to burst at the predicted range.
- (14) United States supported troops will furnish Shore Fire Control Parties. British units will provide Forward Observation Officers and parties.
- (15) United States Naval Gunfire Liaison officers will revert to Naval Command upon order from Naval Attack Force Commander.
- (16) LCS(S) and other craft designated by Attack Force Commanders will support the leading assault wave.
- (17) Task Force Commanders insure that charts, maps, photographs and other pertinent intelligence information receive adequate and timely distribution.
- (18) United States Spotting Agencies and Fire Support Ships use USF 100-B and supplementary code groups listed in Appendix 5 to Communication Plan, Annex C to Operation Plan 7-43. HMS ABERCHOMBIE use United States procedure. British units use B.R. 765 (Combined Operations Gunnery Instructions) and B.R. 766 (Combined Operations Signal Book).

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ANNEX B to
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4. (a) Major reserves of United States ammunition at BIZERTE, ORAN, and in U.S.S. MOUNT BAKER at ALGIERS.
Minor reserves of United States ammunition at PALERMO, ARZEW, TUNIS and TENES.

(b) Reserves of British ammunition at MALTA, BIZERTE and in ammunition ship at PALERMO.

(c) There is no reserve ammunition in the theater for the SOEMBA and FLORES. (Dutch gunboats).

(d) Depth charge testing sets and major torpedo overhaul facilities in U.S.S. DELTA, USS VULCAN and at PT BASE 12.

AUTHENTICATED:

J.M. Boit
J.M. BOIT,
Commander, USNR,
Flag Secretary.

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APPENDIX 3 TO ANNEX "B"

and

APPENDIX 2 TO ANNEX "F"

RULES FOR ENGAGING AIRCRAFT OVER BEACH ASSAULT AREAS

NOTE: The rules contained herein should be given immediate and wide distribution in order that all ships and landing craft will have opportunity to indoctrinate anti-aircraft personnel.

1. Special zones and areas in which these rules will apply have been established as follows:

- (a) Beach assault and Transport areas. This area extends 12,000 yards to seaward and 12,000 yards inland from assault beaches both distances measured from the shore line.
- (b) The Port of SALERNO - Within a radius of 12,000 yards from the center of the port of SALERNO. Effective upon capture of port and establishment of Army anti-aircraft defenses.
- (c) Port of NAPLES. Within 12,000 yards from center of dry dock, Pier 20, Port of NAPLES, except excise of north segment of circle cut by E-W chord through the south corner of CAPODOCHINO airfield. To be effective upon securing NAPLES and establishment of Army anti-aircraft.
- (d) Other areas and zones may be added later.

2. In the above zones and areas:

- (a) By day no aircraft above 3,000 feet is to be engaged unless identified or recognized as hostile or unless the aircraft commits a hostile act, i.e., drops bombs or dives out of the sun.

NOTE: Allied fighters may patrol with long range tanks which will be jettisoned before combat and may fall in the area.

- (b) By day all aircraft below 3,000 feet are to be engaged unless identified as friendly or unless being chased by Allied fighters.
- (c) By night from $\frac{1}{2}$ hour after sunset until $\frac{1}{2}$ hour before sunrise, which times are shown in Annex A of Operation Order 7-43, areas described above are prohibited flying areas for friendly aircraft and rules for opening fire in an Inner Artillery Zone are to apply.

3. Except in the areas specified in Paragraph 1 above, normal rules for opening fire at sea will apply.

AUTHENTICATED:


J. M. BOFT,
Commander, USNR,
Flag Secretary.

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ANNEX "E" TO
COMMANDER WESTERN NAVAL TASK FORCE
OPERATION PLAN NO. 7-43

LOGISTIC PLAN

CONTENTS

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Note:

Ammunition and Torpedoes	Annex "B"
Evacuation of Casualties	Annex "D"
Salvage of Ships and Craft (Issued separately by Commander Naval Salvage Force).	

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1. Fuel. (Navy Special Fuel Oil, Diesel Oil, 100, 87, and 80 Octane Gasoline and Coal.)

- (a) All ships and craft shall fuel as directed by Task Force Commanders from shore stocks and/or tankers located as shown in Appendices I and II respectively, to Logistic Plan, Annex "E", particular emphasis given to:
 - (1) Combatant ships will be fueled to capacity at every opportunity. Such ships assigned escort duty shall plan on fueling from shore stocks to relieve excessive drain on tankers in assault areas.
 - (2) Landing ships and craft will be fueled as operational requirements, beach gradients and port depths necessitate.
- (b) All ship-borne landing craft shall be fueled by the ships to which assigned.
- (c) Task Force Commanders shall inform Commander Western Naval Task Force not less than three (3) days before requiring relief tankers in their respective areas.

IMPORTANT. Senior Officers of Force Units or Commanding Officers of ships operating singly shall report summary of logistic requirements as far in advance as may be practicable before entering ports.

2. Lubricants.

- (a) Small stocks of lubricating oils and greases will be carried by tankers in assault areas.
- (b) Reserve stocks will be carried at PALERMO, MALTA, BIZERTA and other principal refueling ports.
- (c) All ship-borne landing craft shall be supplied by the ship to which assigned. Each craft shall carry a small reserve supply.

3. Water.

- (a) Potable (drinking) water shall be strictly rationed by all ships and craft. Every effort shall be made to reduce reserve feed requirements to a minimum. Ships equipped with distilling plants shall operate such plants as necessary to keep all potable water and reserve feed water tanks filled to capacity at all times.
- (b) Ships and craft not equipped with distilling plants shall take on water at every opportunity, the amount to be as directed by Task Force Commanders dependent upon operational requirements as to draft

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and trim. The facilities of ships equipped with distilling plants shall be utilized to provide water for ships not so equipped and for shore installations when transfer is practicable, within the safe limits of such transfer, based upon prospective operational requirements of the ship(s) involved.

- (c) Each APA and XAP is equipped with 2 or 3 - 600 gallon portable tanks which can be loaded in LCVP's to deliver potable water to the beachos. Each portable tank is equipped with gasoline driven discharge pump and 30 feet of 1 $\frac{1}{2}$ inch hose.
- (d) The following United States LST's have been altered to effect transfer of potable water to shore tankage to be erected by the Army:

LST-306	LST-327	LST-383
LST-308	LST-332	LST-385
LST-311	LST-336	LST-386
LST-326	LST-346	LST-388
		LST-393

Each such LST is provided with sufficient 2 $\frac{1}{2}$ inch hose having quick-closing valve on shore end to discharge water 100 feet inland from shore line when the LST is unloading cargo over a 350 foot pontoon causeway, the inshore end of which may be 300 feet from the beach. Total length of hose from bow of LST to point of discharge may be, therefore, 750 feet.

- (e) Water carried by British LST's in excess of that required for the return passage to North African ports will be available for discharge by trailer pumps to shore tankage. Trailer pumps are to be provided by the British Army.
- (f) Each LST so equipped shall be prepared to discharge not less than 10,000 gallons of potable water to shore tankage immediately after the assault and upon arrival at beaches and/or ports in follow-up convoys. The quantity of water carried shall be increased if beach gradients and port depths permit as directed by the Task Force Commander in order that the quantity discharged may be increased from 10,000 to a maximum of 100,000 gallons per LST per trip as conditions ashore may require.
- (g) In an emergency LCT's, LCM's, LCVP's and LCA's loaded with empty water drums or cans as available on the beach may obtain potable water from LST's and/or other ships by going alongside such ships as may be in the area. Water containers provided shall be so loaded as to facilitate filling without subsequent handling.

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- (h) Each ship and craft make necessary provisions for the expeditious filling of canteens of assault troops immediately prior to disembarkation.
- (i) Water boats "EMPIRE COPPICE" and "ALETTA" or a similar boat will be sailed from BIZERTA to the NAPLES-SALERNO area and will be ordered in to beaches or ports when and if required.
- (j) H.M.S. EMPIRE CHARIAN(LSC) will carry approximately 50,000 gallons of potable water which will be available for ships and craft in the SALERNO area.

4. Provisions and Emergency Clothing Stocks.

(a) Provisions.

- (1) All ships and craft shall provision as directed by Task Force Commanders.

(b) Emergency Clothing Stocks.

- (1) Emergency clothing stocks will be available at PALERMO, BIZERTA, MALTA, ORAN and NAPLES.

5. Dry Docking Facilities.

(a) Dry Docks other than Pontoon Dry Docks.

- (1) The demand for dry-docking ships in the MEDITERRANEAN is far in excess of available facilities. Dry-docking will be arranged therefore, only in cases of extreme emergency and for such periods as may be necessary.
- (2) Requests for dry-docking shall be sent by despatch via Task Force Commanders to Commander Western Naval Task Force who will request priority from Commander in Chief, MEDITERRANEAN.
- (3) Appendix III to Logistic Plan, Annex "E" lists locations and characteristic data of dry docks in the MEDITERRANEAN.

(b) Pontoon Dry Docks.

- (1) A number of 250 ton and 350 ton pontoon dry docks are available for dry-docking SC's, YMS's, LCI(L)'s, LCT(5)'s, PT's, ARB's and ship-borne landing craft.
- (2) Requests for the use of pontoon dry docks shall be sent by despatch via Task Force Commander to Naval Officer in Command of port having cognizance.

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(3) Appendix IV to Logistic Plan, Annex "E", lists locations and characteristic data of pontoon dry docks in the MEDITERRANEAN.

6. Ship Repair Facilities.

(a) Ship repair facilities are likewise overtaxed and repair requests must be restricted to emergency items of military necessity.

(b) Repair facilities normally available as adjuncts to dry-docking facilities and naval bases are augmented in MERS EL KEBIR, ORAN and ALGIERS by local private concerns. The quality of the work is generally good.

(c) Repair Ships will be stationed as follows:

U.S.S. DELTA (AR 9) BIZERTA
U.S.S. VULCAN (AR 5) ALGIERS
U.S.S. ACHELOUS (ARL 1) BIZERTA

H.M.S. WAYLAND FERRYVILLE
H.M.S. VINDICTIVE FERRYVILLE
H.M.S. MAIDSTONE ALGIERS

Note: U.S.S. VULCAN is assigned primarily as a tender and repair ship for CL's and DD's. Spare propellers for United States DD's are available at ALGIERS, ORAN and CASABLANCA. Specific data may be obtained from Commander Western Naval Task Force.

(d) In addition to the main repair bases, the following small repair bases on shore at locations named are available.

UNITED STATES NAVY
BIZERTA, ARZEW, TUNIS, PALERMO.

ROYAL NAVY
BOUGIE, DJEDJELLI, BONE, FERRYVILLE, SOUSSE and TRIPOLI.

(e) United States Navy PT Base No. 12 for Motor Torpedo Boat Squadron FIFTEEN and ARB Squadron ONE is located at BIZERTA. Sub-base at PALERMO.

Royal Navy Motor Torpedo Boat Squadron Bases are located at BONE and MALTA.

7. Maintenance of Landing Craft.

(a) Following the assault and for an indefinite period thereafter, merchant ships will be unloaded while lying off beaches or ports in the NAPLES-SALERNO area.

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- (b) Merchant ships in the Northern area will be unloaded with the assistance of LCT's exclusively.
- (c) Merchant ships in the Southern area will be unloaded with the assistance of LCT's sailed from the Northern area and LCM's, the latter to be made available as follows:
- (1) Fifteen (15) of the following sixteen (16) merchant ships are scheduled to arrive off beaches in the Southern area on D + 2:

OLIVER H. PERRY	LEWIS MORRIS
ALEXANDER G. BELL	HUGH WILLIAMSON
DANIEL WEBSTER	WINFIELD SCOTT
BUSHROD WASHINGTON	ALEXANDER MARTIN
CHARLES PIEZE	JOHN H. PAYNE
WILLIAM DEAN HOWELL	GEORGE MATTHEWS
EDWARD P. COSTIGAN	DAVID CALDWELL
WILLIAM BRADFORD	JAMES WOODROW

- (2) Each of these fifteen (15) ships will carry at least two (2) LCM(3)'s. The LCM(3) contingent assigned to each ship will consist of an Officer-in-Charge, one (1) MoMM plus a crew of five (5) men for each LCM(3) carried. In addition, spare parts, spare propellers, a supply of lubricating oil and greases and diesel oil will be carried.
- (3) Upon completion of unloading of ship to which assigned, the Officer-in-Charge, with all personnel, equipment and remaining diesel oil under his charge shall report to the Beach Master of the nearest Shore Party for temporary duty. Upon completion of this temporary duty and when directed by the Beach Master he shall arrange with the Naval Officer in Command, SALERNO for return of all personnel and material under his charge to BIZERTE or ORAN as may be practicable. Upon arrival at either of these ports he will report to Commander, Landing Craft and Bases, Northwest African Waters or Commander, EIGHTH Amphibious Force respectively, for duty.
- (4) As soon as practicable after the assault, 14 LCM(1)'s carried by H.M.S. DERWENTDALE (LSG) and 21 LCM(3)'s carried by H.M.S. CHARMIAN (LSC) shall be assigned to assist in the unloading of merchant ships in the Southern area. H.M.S. DERWENTDALE and H.M.S. CHARMIAN shall remain to service these craft as conditions permit as directed by Commander Task Force 81. When directed to sail from the Southern area, their LCM's with crews together with maintenance personnel, available spare parts and remaining 80 octane gasoline and diesel oil in 5 gallon containers shall be ordered to report to the Naval Officer in Command, SALERNO for temporary duty.

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Note: H.M.S. DERWENTDALE will carry approximately 4000 gallons of 80 octane gasoline in 5 gallon containers for the LCM(1)'s assigned.

H.M.S. EMPIRE CHARILAN will carry approximately 7500 gallons of diesel oil in 5 gallon containers for the LCM(3)'s assigned.

- (d) LCT's and LCM's shall fuel to capacity at every opportunity from tankers arriving in the area. In an emergency, diesel oil may be obtained from LST's or from the several diesel powered ships that will be operating continuously in the NAPLES-SALERNO area.
- (e) Arrangements have been made with the British Army for the supply of 15 tons of 80 octane gasoline and 10 tons of diesel oil (each packed in 5 gallon containers) as reserve supply on the beach in each sector of the Northern area. One-third to be available on D-Day and the balance not later than D + 3.
- (f) Salvage and repair of stranded landing craft will be expeditiously carried out by the Beach Repair Parties under the direction of the Officers-in-Charge assisted by the craft crews.
- (g) British LCT's No. 164 and No. 169 will land beach repair and salvage gear with Beach Repair Parties in the Northern area and will remain available for towing stranded craft.
- (h) United States salvage parties from APA's, XAP's and AKA's in LCM(3)'s equipped with pumps and salvage gear will augment Beach Repair Parties in the Southern area.
- (i) Task Force Commanders shall issue detailed directives in order that the losses of landing craft will be materially lower than those experienced in previous amphibious operations.
- (j) Ship-borne landing craft assigned APA's, XAP's, AKA's and LST's will not remain to assist in the unloading of merchant ships.

AUTHENTICATED:


J. M. BOIT,
Commander, U.S.N.R.,
Flag Secretary.

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ANNEX E to
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APPENDIX I to LOGISTIC PLAN, ANNEX "E"

Shore stocks of fuel oil, diesel oil, gasoline and coal are maintained at Ports named in the following table.

LOCATION	FUEL OIL	DIESEL OIL	GASOLINE			COAL
			100	87	80	
ALGIERS	X	X	-	-	-	X
BONE	X	-	X	-	-	X
BIZERTA	X	X	X	X	X	X
MALTA	X	X	X	-	X	X
TUNIS	-	X	-	X	X	-
SOUSSE	-	X	-	-	-	-
SFAX	-	X	-	X	X	-
TRIPOLI	X	-	-	-	-	X
PALERMO	X	X	X	X	X	X
AUGUSTA	X	X	-	-	-	X
CATANIA	-	-	-	-	-	X

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ANNEX E to
OPERATION PLAN
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APPENDIX II LOGISTIC PLAN, ANNEX "E"

LOCATION OF FUELING TANKERS

Fueling tankers are scheduled to be stationed as shown in the following table prior to D - Day:

LOCATION	FUEL OIL	DIESEL OIL	GASOLINE
	1-large "EMPIRE SALVAGE" (**) 9000 tons fuel oil 1400 tons diesel oil 500 tons 100 octane	1-small "TRITON" (**) 35 tons	"WELSH COAST" (*) 200 tons 100 octane 100 tons 87 octane Lubricating oils.
BIZERTA	1-large "LORRAINE" 13000 tons		
	1-small "AGATHA" 3500 tons		
PALERMO	1-large "SAN AMADO" 7900 tons 1-large "ARGON" 7500 tons fuel oil 3500 tons diesel oil	"EMPIRE FAY" (**) 600 tons. Lubricating oils.	"EMPIRE BAIRN" (**) 400 tons 100 octane 200 tons 87 octane Lubricating oils.
AUGUSTA	1-large -	1-small -	-----
MALTA	1-large - 2-small -	3-"VIDONIA" class (**) each 40 tons.	"EMPIRE DAMSEL" or "EMPIRE LASS" 600 tons 100 octane Lubricating oils.
TRIPOLI	1-large 1-large "ALEXANDRE ANDRE" (*) 3000 tons fuel oil 3000 tons diesel oil 20 tons cased 87 octane Lubricating oils	"OCTANE" Diesel oil plus 10 tons 87 octane. Lubricating oils.	-----

NOTE:

(*) Tankers to move forward in Assault Convoy.

(**) Tankers to move forward to Naples area when required.

Collier "EMPIRE SPEY" carrying 5000 tons coal will be stationed at BIZERTA and will be held available for sailing on short notice to NAPLES.

H.M.S. DERWENTDALE (LSG) will be loaded with 4000 tons of fuel oil for discharge to ships in the NAPLES-SALERNO area.

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ANNEX E to
OPERATION PLAN
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APPENDIX III to LOGISTIC PLAN, ANNEX "E"

LOCATION AND CHARACTERISTIC DATA OF DRY DOCKS

PORT	LENGTH			BREADTH MEAN HIGH WATER LEVEL	DEPTH MEAN HIGH WATER OVER SILL	REMARKS
	COPING HEAD	FLOOR HEAD	KEEL BLOCKS			
CASABLANCA	436'4"	-	367'5"	60'8"	-	Floating Dock 5000 ton lift
GIBRALTAR No. 1	908'4"	904'10"	859'4"	122'9"	40'2"	
GIBRALTAR No. 2	603'	586'6"	530'	93'8"	38'8"	
GIBRALTAR No. 3	503'	486'6"	430'	93'8"	38'7"	
GIBRALTAR No. 4	250'	249'3"	241'2"	46'	14'2"	Max. draft of ves- sels taken 12'6"
ORAN No. 1	721'9"	Extreme Length	678'5"	108'3"	32'8"	Floating Dock 20000 ton lift
ORAN No. 2	394'	Extreme Length	390'	60'	-	Floating Dock 3000 ton lift
ORAN No. 3	380'	Extreme Length	350'	50'	19' over blocks	Floating Dock A.F.D. XVIII 2750 T. lift
ALGIERS No. 1	455'4"	446'7"	368'	63'	27'4"	
ALGIERS No. 2	268'7"	255'	191'	45'	18'7"	
MALTA No. 1	582'9"	573'9"	469'5"	75'9"	23'3"	Double Dock. Can be divided.
MALTA No. 2	576'6"	538'	433'6"	92'9"	33'8"	
MALTA No. 3	471'8"	450'	379'9"	78'2"	32'3"	
MALTA No. 4	796'6"	790'	588'	93'9"	34'3"	
PALERMO	-	-	-	-	-	Floating Dock 1000 ton lift
LA GOUL MITE	-	193'	-	37'	11'1"	Max. draft of ves- sels taken 7'
FERRYVILLE No. 1	626'	-	541'	94'	30'6"	Width at bottom of sill 81'
AL EXANDRIA	682'9"	Extreme Length	641'3"	108'	-	Floating Dock 31700 ton lift

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ANNEX E to
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APPENDIX IV to LOGISTIC PLAN, ANNEX "E"

LOCATION AND CHARACTERISTIC DATA
OF PONTOON DRY DOCKS

LOCATION

<u>Location</u>	<u>Operated By</u>	<u>250 Ton</u>	<u>350 Ton</u>
BIZERTA	U. S. Navy	2	1
ARZEW	U. S. Navy	1	-
PALERMO	U. S. Navy	1	-
ALGIERS	Royal Navy	1	-
BOUGIE	Royal Navy	1	-
BONE	Royal Navy	1	-
FERRIVILLE	Royal Navy	2	2
SOUSSE	Royal Navy	-	1
VALTA	Royal Navy	2	1

CHARACTERISTIC DATA

<u>Maximum Capacity of Dock</u>	<u>250 Ton</u>	<u>350 Ton</u>
Size of Dock	6 X 18 Pontoon	6 X 24 Pontoon
Length of Deck	105 ft.	140 ft.
Width of Deck	43 ft.	43 ft.
Draft over Deck (submerged)	13 ft.	13 ft.
C.G. of Maximum load above Deck	14 ft.	18 ft.
Draft of Dock (submerged)	18 ft.	18 ft.

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ANNEX "F" TO OPERATION PLAN NO. 7-43

AIR PLAN

1. SUPPORT CARRIER FORCE

- (A) SUPPORT Carrier Force operate in area to seaward of GULF of SALERNO. Avoid convoy routes, see Convoy Plan, Annex I. Provide strong fighter cover over the assault areas as soon after first light as practicable. Provide continuous fighter cover over the assault areas during daylight hours.
- (B) Fleet aircraft carriers H.M.S. FORMIDABLE and H.M.S. ILLUSTRIOUS will provide fighter cover for Support Carrier Force.
- (C) Be prepared to fly Carrier aircraft into and operate from first captured airfields until relieved by Mediterranean Air Command aircraft. Carrier aircraft will then be flown back to their carriers staging through SICILIAN airfields. This situation is likely to happen only if airfield is captured and reported ready during last two hours of daylight.
- (D) When released by Commander Western Naval Task Force, proceed as directed by Commander-in-Chief, Mediterranean.
- (E) The U.S.S. ANCON is the fighter director ship for all land based fighter aircraft in the assault area, with standby ships HMS HILARY and U.S.S. SAMUEL CHASE in the order named. H.M.S. ULSTER QUEEN is the fighter director ship for all Fleet Air Arm fighter aircraft, with standby ship U.S.S. ANCON. Should divided fighter direction prove unsatisfactory, U.S.S. ANCON will be ordered to assume direction of all fighters.

2. CONTROL OF AIR OPERATIONS

- (A) All fighter and fighter-bomber units of the Tactical Air Force operating over the NAPLES-SALERNO area during the initial phases will be controlled by the Commanding General, 12th Air Support Command under the direction of the Air Officer Commanding, Tactical Air Force. Copies of plans for these air operations will be furnished major units.

3. GENERAL

- (A) Allied markings of aircraft.
 - (1) The British and French will retain the roundel as at present.
 - (2) United States Naval and Military Aircraft will be marked as follows:
 - (a) The straight line formed by the top edges of the two star points parallel to the top of fuselage and the leading edge of wings, is continued for a distance of one radius of the blue circle out from each side thereof.
 - (b) This continued line forms the tops of two rectangles one on each side of blue circle, one radius long and one half radius wide.

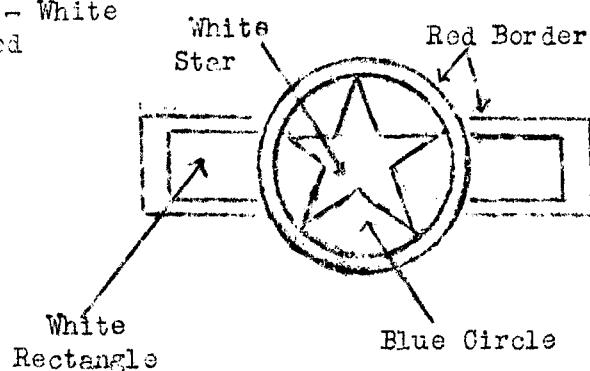
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ANEX "F" TO
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(c) The entire design is outlined with a red border, one eighth (1/8) radius wide.

(d) Color scheme of this design is as follows:

Star - White
Circle - Blue
Rectangles - White
Border - Red



(e) United States Naval aircraft will use gray, in place of white on the top side of the wing only.

(B) Publications concerning vessels and aircraft are contained in:

- (1) Mediterranean Joint Air Orders.
- (2) Recognition Manual - S.P. 02220(2) (Admiralty).
- (3) Aircraft recognition instructions - S.P. 02312(2) or (3).
- (4) Air Ministry Publications S.D. 158(S.D. 158 (1A) and 1(B), (2), (3) and (4)).

(C) A temporary United States Naval seaplane base is established at NORTH LAKE, TUNIS. Care must be taken to land in the buoied areas as other parts of the lake are very shallow. This seaplane base has facilities for subsistence and billeting, base radio, minor overhaul, gasoline, oil and ammunition. Attention is directed to the balloon barrage at the harbor entrance and dock area of Lt. Goulette.

(D) Enemy air intelligence is contained in Annex A, Enemy Strength, Air Forces.

(E) Friendly aircraft operating in this theatre:

(1) Single Engine Aircraft.

Spitfire	Kittyhawk (P40)
Seafire	Mustang (P51)(A36)
Hurricane	Airacobra (P39)

(2) Twin Engine Aircraft.

Wellington	Hudson (PBO)	Bisley	Lightning (P38)
Baltimore	Beaufighter	Bombay	Mitchell (B25)
Mosquito	Beaufort	Albermarle	Marauder (B26)
Boston (A20)	Dakota (C47)		

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ANNEEX "F" TO
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(3) Four Engine Aircraft.

Fortress (B-17)	Liberator (B24)
Halifax	Lancaster

(4) Patrol Seaplanes.

Catalina (PBY)
Sunderland

(5) Shipborne Aircraft.

Albacore	Seafire
Barracuda	Swordfish
Seagull (SOC)	Kingfisher (OS2U)
Martlett (F4F)	Walrus

APPENDICES

1. Air Communication Instructions.

DISTRIBUTION:

Same as Op-Plan 7-43.

AUTHENTICATED:

J. M. Boit
J. M. BOIT,
Commander, USNR,
Flag Secretary.

ANNEX "G" TO OPERATION PLAN NO. 7-43

DEPARTURE AND RENDEZVOUS PLAN

MISSION

To ensure an orderly, timely, and well-coordinated approach in order to deliver simultaneous attacks in force.

DECISION

This force will make preliminary dispositions of forces to conform to the steaming radii and seaworthiness of various types of vessels employed and to the geographical loading points of the military forces; will sail combat-loaded transports with maximum surface protection over a prescribed route which gives a long run on the approach course; will make movements conforming to the "cover plan"; and will make rendezvous of forces near a landfall to obtain an accurate navigation fix and deploy forces in daylight preparatory to entering the attack areas, in order to ensure an orderly, timely, and well-coordinated approach.

PRELIMINARY DISPOSITIONS

ALLIED Naval Forces in the Western Naval Task Forces will be disposed as shown below by the dates shown:

<u>LOCATION</u>	<u>SHIP/CRAFT</u>	<u>DATE</u>	<u>TASK ORGANIZATION</u>
ORAN	USS SAMUEL CHASE(APA26)	D-4	TF 81
"	USS CHARLES CARROLL (APA28)	D-4	TF 81
"	USS THOMAS JEFFERSON (APA30)	D-4	TF 81
"	USS JAMES O'HARA (XAP90)	D-4	TF 81
"	USS ARCTURUS (AKA1)	D-4	TF 81
"	USS PROCYON (AKA2)	D-4	TF 81
"	USS BARNETT (APA5)	D-4	TF 81
"	USS JOSEPH DICKMAN (APA13)	D-4	TF 81
"	USS ELIZABETH STANTON (XAP69)	D-4	TF 81
"	USS LYON (XAP71)	D-4	TF 81
"	USS FREDERICK FUNSTON (XAP89)	D-4	TF 81
"	USS OBERON (AKA14)	D-4	TF 81
"	USS ANDROMEDA (AKA15)	D-4	TF 81
"	HMS BOXER (LST)	D-4	TF 81
"	HMS BRUISER (LST)	D-4	TF 81
"	HMS THRUSTER (LST)	D-4	TF 81
"	S.S. ORONTES (LSI(L))	D-4	TF 81
"	S.S. MARNIX VAN ST. ALDEGONDE(LSI(L))	D-4	TF 81
"	S.S. DUTCHESS OF BEDFORD (LSI(L))	D-4	TF 81
"	HMS COLOMBO (1 CL)	D-4	TF 81
"	USS PHILADELPHIA (1 CL)	D-4	TF 81
"	USS SAVANNAH (1 CL)	D-4	TF 81
"	USS BOISE (1 CL)	D-4	TF 81
"	USS WAINWRIGHT (1 DD)	D-4	TF 81
"	USS TRIPPE (1 DD)	D-4	TF 81
"	USS RHIND (1 DD)	D-4	TF 81
"	USS ROWAN (1 DD)	D-4	TF 81
"	USS PLUNKETT (1 DD)	D-4	TF 81
"	USS NIBLACK (1 DD)	D-4	TF 81
"	USS BENSON (1 DD)	D-4	TF 81
"	USS GLEAVES (1 DD)	D-4	TF 81
"	USS MAYO (1 DD)	D-4	TF 81

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<u>LOCATION</u>	<u>SHIP/CRAFT</u>	<u>DATE</u>	<u>TASK ORGANIZATION</u>
ORAN	USS WOOLSEY (1 DD)	D-4	TF 81
ORAN	HMS BLENCAETHRA (1 DD)	D-4	CTG 80.5
ORAN	HMS OAKLEY (1 DD)	D-4	CTG 80.5
ORAN	HMS HAMBLEDON (1 DD)	D-4	CTG 80.5
ORAN	USS LUDLOW (1 DD)	D-4	TF 81
ORAN	USS COLE (1 ODD)	D-4	TF 81
ORAN	USS SEER (1 AM)	D-4	TF 81
"	USS SKILL (1 AM)	D-4	TF 81
"	USS SPEED (1 AM)	D-4	TF 81
"	USS STRIVE (1 AM)	D-4	TF 81
"	USS STEADY (1 AM)	D-4	TF 81
"	USS SUSTAIN (1 AM)	D-4	TF 81
"	USS PREVAIL (1 AM)	D-4	CTF 81
"	USS PILOT (1 AM)	D-4	CTF 81
"	USS WEELAWKEN (1 CM)	D-4	CTG 80.5
"	USS SILEM (1 CM)	D-4	CTG 80.5
"	USS KEOKUK (1 CM)	D-4	CTG 80.5
ALGIERS	HMS UNICORN (1 CV)	D-4	CTF 88
"	HMS HUNTER (ACV)	D-4	CTF 88
"	HMS BATTLER (ACV)	D-4	CTF 88
"	HMS STALKER (ACV)	D-4	CTF 88
"	HMS ATTACKER (ACV)	D-4	CTF 88
"	HMS EURYALUS (1 CL)	D-4	CTF 88
"	HMS SCYLLA (1 CL)	D-4	CTF 88
"	HMS CHARYEDIS (1 CL)	D-4	CTF 88
"	O.R.R. SLAZAK (1 DD)	D-4	CTF 88
"	O.R.P. KRAKOWIAK (1 DD)	D-4	CTF 88
"	HMS CLEVELAND (1 DD)	D-4	CTF 88
"	HMS HOLCOMBE (1 DD)	D-4	CTF 88
"	HMS AATHERSTONE (1 DD)	D-4	CTF 88
"	HMS LIDDESDALE (1 DD)	D-4	CTF 88
"	HMS FIRNDALE (1 DD)	D-4	CTF 88
"	HMS PUCKERIDGE (1 DD)	D-4	CTF 88
"	HMS CALPE (1 DD)	D-4	CTF 88
"	HMS HAYDON (1 DD)	D-4	CTF 88
"	USS ANCON (1 AGC)	D-4	TF 80.1
"	HMS ULSTER QUEEN	D-4	TF 80.1
"	USS EDISON (1 DD)	D-4	TF 81
"	USS BRISTOL (1 DD)	D-4	TF 81
"	USS NICHOLSON (1 DD)	D-4	TF 80.1
TRIPOLI	HMS HILARY (1 AGC)	D-8	TF 85
"	HMS DELHI (1 CL/AA)	D-8	TF 85
"	HMS ALYNBANK (AA)	D-8	TF 85
"	4 LCG (No. 2, 4, 8, 19)	D-8	TF 85
"	4 LCF (No. 10, 12, 15, 16)	D-8	TF 85
"	2 LCR (No. 140, 141)	D-8	TF 85
"	HMS GLENGYLE (LST(L))	D-8	TF 85
"	S.S. SOBIESKI (LST(L))	D-8	TF 85
"	S.S. DEVONSHIRE (LST(L))	D-8	TF 85

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TRIPOLI	HMS ROYAL ULMSTERMAN (LSI(M))	D-8	TF 85
"	HMS ROYAL SCOTSMAN (LSI(M))	D-8	TF 85
"	HMS ULMSTER MONARCH (LSI(M))	D-8	TF 85
"	HMS PRINCESS BEATRIX (LSI(M))	D-8	TF 85
"	HMS PRINCE LEOPOLD (LSI(S))	D-8	TF 85
"	HMS PRINCESS CHARLOTTE (LSI(S))	D-8	TF 85
"	HMS DULVERTON (1 DD)	D-8	TF 85
"	HMS TETCOTT (1 DD)	D-8	TF 85
"	HMS BELVOIR (1 DD)	D-8	TF 85
"	HMS PINDOS (1 DD)	D-8	TF 85
"	HMS BEAUFORT (1 DD)	D-8	TF 85
"	HMS EXMOOR (1 DD)	D-8	TF 85
"	HMS QUANTOCK (1 DD)	D-8	TF 85
"	HMS BROCKLESBY (1 DD)	D-8	TF 85
"	HMS ALBACORE)	D-8	TF 85
"	HMS ACUTE)	D-8	TF 85
"	HMS MUTINE)	D-8	TF 85
"	HMS ESPIEGLE)	7 Fleet Minesweepers	TF 85
"	HMS FLY)	D-8	TF 85
"	HMS CIRCE)	D-8	TF 85
"	HMS CADMUS)	D-8	TF 85
"	33 LCT	D-8	TF 85
"	20 LST	D-8	TF 85
"	HMS ROTHESAY (1 MS)	D-8	TF 85
"	HMS FELIXSTONE (1 MS)	D-8	TF 85
"	10 HDMU's (No. 1242, 1246, 1247, 1253, 1254, 1258, 1270, 1271, 1297, 1301.	D-8	TF 85
"	4 MMS	D-8	TF 85
"	4 BYMS	D-8	TF 85
"	34 LC1(L)	D-8	TF 85
"	10 ML	D-8	TF 85
"	S.S. MIDDLESEX TRADER (M/T)	D-8	TF 85
"	S.S. MARVICK (M/T)	D-8	TF 85
"	S.S. CITY OF EVANSVILLE (M/T)	D-8	TF 85
"	S.S. ALEXANDRE ANDRE (AO)	D-8	TF 85
"	S.S. LOCHEE (AOG) SOUSSE	D-8	TF 85
"	S.S. HENGIST (AT)	D-8	TF 85
"	HMS FOXTROT (1 Trawler)	D-8	TF 85
"	HMS GAVOTTE (1 Trawler)	D-8	TF 85
"	HMS TANGO (1 Trawler)	D-8	TF 85
"	HMS PIROUETTE (1 Trawler)	D-8	TF 85
"	HMS ENSAY (1 Trawler)	D-8	TF 85
"	HMS MOUSA (1 Trawler)	D-8	TF 85
"	HMS SHEPPEY (1 Trawler)	D-8	TF 85
"	HMS ST. KILDA (1 Trawler)	D-8	TF 85
"	HMS KING SOL (1 Trawler)	D-8	TF 85
"	HMS STELLA CARINA (1 Trawler)	D-8	TF 85
"	HMS VISENDA (1 Trawler)	D-8	TF 85

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<u>LOCATION</u>	<u>SHIP/CRAFT</u>	<u>DATE</u>	<u>TASK ORGANIZATION</u>
BIZERTA	HMS ROBERTS (1 Monitor)	D-7	TF 85
"	HMS ABERCROMBIE (1 Monitor)	D-7	TF 81
"	FLORES (1 Gunboat) Dutch	D-7	TG 80.4
"	SOEMBA (1 Gunboat) Dutch	D-7	TG 80.4
"	5 LCG (No. 1, 5, 6, 7, 20)	D-7	TF 85
"	3 LCF (No. 3, 5, 8)	D-7	TF 85
"	1 LCR (No. 136)	D-7	TF 85
"	31 LCT	D-7	TF 85
"	6 LCT	D-7	TF 81
"	6 PC	D-7	TF 85
"	8 PC	D-7	TF 81
"	18 PSC	D-7	TF 85
"	9 YMS	D-7	TF 85
"	44 LCI(L)	D-7	TF 85
"	USS KNIGHT	D-7	TG 80.4
"	HMS BLANKNEY (1 DD)	D-7	TF 85
"	HMS MENDIP (1 DD)	D-7	TF 85
"	HMS BRECON (1 DD)	D-7	TF 85
"	12 YMS	D-7	TF 81
"	U.S.S. DALLAS (1 ODD)	D-7	TF 81
"	USS BERNADOU (1 ODD)	D-7	TF 81
"	4 MTB	D-7	TG 80.4
"	4 SC	D-7	TG 80.4
"	6 ML (No. 554, 555, 556, 557, 559, 560)	D-7	TG 80.4
"	1 PT	D-7	TG 80.4
"	10 ARB	D-7	TG 80.4
"	16 PT	D-7	TG 80.2
"	USS BISCAYNE (1 AGC)	D-7	TF 85
"	USS NARRAGANSETT (1 AT)	D-7	TF 85
"	USS NAUSET (1 AT)	D-7	TF 85
"	S.S. BRITTANY (Coaster)	D-7	TF 85
"	S.S. ALCINDUS (M/T)	D-7	TF 85
"	S.S. PROMETHEUS (M/T)	D-7	TF 85
"	S.S. BOLLSTA (Coaster)	D-7	TF 85
"	S.S. WELSH COAST (AOG)	D-7	TF 85
"	S.S. EMPIRE COPPICE (Water)	D-7	TF 85
"	20 LST	D-7	TF 85
"	HMS RHYL (Minesweeper)	D-7	TF 85
"	HMS BRIXHAM (Minesweeper)	D-7	TF 85
"	HMS POLRUAN (Minesweeper)	D-7	TF 85
"	HMS BUDE (Minesweeper)	D-7	TF 85
"	HMS CLACTON (Minesweeper)	D-7	TF 85
"	HMS STORNOWAY (Minesweeper)	D-7	TF 85
"	HMS EMPIRE CHARMIAN (1 LSC)	D-7	TF 81
"	HMS DERWENTDALE (1 LSG)	D-7-	TF 81
"	USS HOPI (1 AT)	D-7	TF 81
"	USS MORENO (1 AT)	D-7	TF 81
"	16 LST	D-7	TF 81
"	2 LST	D-7	TF 85
"	20 LCI(L)	D-7	TF 81

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MALTA	HMS MAURITIUS (AA(CL))	D-3	TF 85
"	HMS UGANDA (AA(CL))	D-3	TF 85
"	HMS ORION (AA(CL))	D-3	TF 85
"	HMS NUBIAN (1 DD)	D-3	TF 85
"	HMS LAFOREY (1 DD)	D-3	TF 85
"	HMS LOOKOUT (1 DD)	D-3	TF 85
"	HMS LOYAL (1 DD)	D-3	TF 85
"	HMS TARTAR (1 DD)	D-3	TF 85
PALERMO	HMS PRINCE CHARLES (LSI(S))	D-1	TF 85
"	HMS PRINCE ALBERT (LSI(S))	D-1	TF 85
"	HMS PRINCESS ASTRID (LSI(S))	D-1	TF 85
"	6 LCI(L)	D-1	TF 81
"	2 LCI(L)	D-1	TF 85
"	HMS LADBURY (1 DD)	D-1	TF 85
"	HMS BLACKMORE (1 DD)	D-1	TF 85
"	9 LST	D-1	TF 81
"	6 LCI(L)	D-1	TF 81

METHOD OF EXECUTION

TASK FORCE 80.

Task Group 80.1 sail from ALGIERS early afternoon of D-3 in Convoy NSF-1X. Rendezvous with Convoy NSF-1 in position Latitude 37°10'N., Longitude 3°06'E. at 1830/D-3. Take station in Convoy NSF-1 as directed by C.T.F. 81.

Task Group 80.2 sail from BIZERTA at 1300/D-3 in Convoy FSM-1X with T.G. 80.4. Stage at PALERMO sailing early a.m. D-1 with Convoy FSM-1X. Route in accordance with Convoy Plan, Annex I. When released by C.T.G. 80.4 on D-1 proceed indep n-dently and execute Screening Directive, Annex "K".

Task Group 80.4 sail from BIZERTA, in company with T.G. 80.2, at 1300/D-2 in Convoy FSM-1X. Route in accordance with Convoy Plan, Annex "I". Stage at PALERMO, sailing early a.m. D-1. Release T.G. 80.2 at such time as to ensure T.G. 80.2 reaching station at the proper time for the execution of Screening Directive Annex "K". Assign 4 SC of T.G. 80.4 as escort for Convoy FSS-2Y departing PALERMO 0345/D-1 to rendezvous at Point PR with Convoy FSS-2X. Upon effecting rendezvous 4 SC movements as directed by C.T.G. 80.4. On D-1 detach ML assigned to execute Air Beacon Directive, Annex "O".

Task Group 80.5 sail ORAN D-3 in Convoy NSM-1. Route in accordance with Convoy Plan, Annex "I". Stage at BIZERTA until called forward by C.W.N.T.F.

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TASK FORCE 81. sail forces comprising Convoy NSF-1 from ORAN on D-4. Route in accordance with Convoy Plan, Annex "I". Rendezvous with Convoy NSF-1X in position Latitude $37^{\circ}10'N$., Longitude $3^{\circ}06'E$ at 1830/D-3. Assign stations in Convoy NSF-1 to ships joining from ALGIERS. When passing through Point NQ at 1930/D-1 execute Approach Plan, Annex "J".

Sail forces comprising Convoy FSS-2X from BIZERTA on D-2 immediately after departure of Convoy FSS-2. Route in accordance with Convoy Plan, Annex I. At 0800/D-1 Convoy FSS-2X rendezvous with Convoy FSS-2Y at Position PR. Convoy FSS-2X will be released before dark on D-1, thereafter executing the Approach Plan issued by C.T.F. 81.

Sail forces comprising Convoy FSS-2Y from PALERMO early D-1 under escort of 4 SC assigned by C.T.G. 80.4. Route in accordance with Convoy Plan, Annex I. At 0800 D-1 Convoy FSS-2Y rendezvous at Point PR with Convoy FSS-2X. Escorts then released and proceed independently in accordance with orders of C.T.G. 80.4. Convoy FSS-2Y is the Reserve Group loaded with one R.C.T. of the 45th Division. Upon arrival in the Southern Attack Force area, the Reserve Group will close ANCON and await orders of C.W.N.T.F.

Task Force 85 sail forces comprising Convoy TSS-1 from TRIPOLI on D-6. Route in accordance with Convoy Plan, Annex "I". At 2000/D-5 LCT 164 and LCT 169 will rendezvous with Convoy TSS-1 in Latitude $35^{\circ}50'N$., Longitude $11^{\circ}13'E$. Stage Convoy TSS-1 at TERMINI where 24 LCI(L) and 6 Minesweeping MLs will join ex-TSM-1. Fuel MLs and HDMLs at TERMINI. Sail Convoy TSS-1 from TERMINI on D-2, routing in accordance with Convoy Plan, Annex "I". When passing through Point NL at 1130/D-1 execute Approach Plan issued by C.T.F. 85.

Sail forces comprising Convoy TSM-1 from TRIPOLI on D-4. Route in accordance with Convoy Plan, Annex "I", staging to TERMINI. At TERMINI fuel all MLs. At TERMINI detach 24 LCI(L) to join Convoy TSS-1. At TERMINI Convoy TSM-1 will be joined by 9 LST and 4 HDMLs ex-MILAZZO. Sail Convoy TSM-1 from TERMINI at 0600/D-1, routing in accordance with Convoy Plan, Annex "I". Rendezvous with Convoy TSS-2 at Point NG at 1130/D-1. After passing through Point NK execute Approach Plan issued by C.T.F. 85.

Sail forces comprising Convoy TSF-1 from TRIPOLI on D-3. Route in accordance with Convoy Plan, Annex I. Rendezvous with Force "K" at Point TM at 0700/D-1. On Force "K" joining up, detach destroyers in groups to fuel at PALERMO and rejoin the convoy. On D-1 detach destroyer assigned to execute Air Beacon Directive, Annex "O". When passing through Point NJ at 1715/D-1 execute Approach Plan, Annex J.

Sail forces comprising Convoy FSS-1 from BIZERTA on D-4. Route in accordance with Convoy Plan, Annex "I", staging at CASTELLAMARE. Fuel LCTs. Dispatch two LCTs to PALERMO to embark Ranger and Commando equipment and rejoin FSS-1 at CASTELLAMARE. These two LCTs rendezvous with Convoy TSF-1 prior to landing in assault area. Sail Convoy FSS-1 from CASTELLAMARE at 1000/D-2, routing in accordance with Convoy Plan, Annex "I". Release 6 LCT loaded with U.S. 36th Division armor sufficiently early to enable them to reach Southern Attack Force transport area by 0600/D. After passing through Point NR, subsequent movements of Convoy FSS-1 in accordance with Approach Plan issued by C.T.F. 85.

Sail forces comprising Convoy TSS-2 from TRIPOLI on D-3. Route in accordance with Convoy Plan, Annex "I". At 0800/D-2 Convoy TSS-2 will be joined by Petrol Carrier LOCHEE in Latitude $35^{\circ}56'N$., Longitude $11^{\circ}12'E$. Five LST towing pontoons will also join at this point. On D-1 detach MLs and HDMLs to PALERMO to fuel. At 1130/D-1 Convoy TSS-2 will rendezvous with Convoy TSM-1 at Point NG. When passing through Point NK at 2030/D-1 Convoy TSS-2 execute Approach Plan issued by C.T.F. 85.

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Sail forces comprising Convoy FSM-1 from BIZERTA on D-3. Route in accordance with Convoy Plan, Annex "I", staging at CASTELLAMARE. Eight LCI(L) from Convoy FSM-1 will be staged to PALERMO on D-2 where they will embark Rangers and Commandos and will sail from PALERMO in Convoy TSF-1X on D-1. On D-1, ML-338 will join Convoy FSM-1 from Convoy TSM-1. Sail Convoy FSM-1 from CASTELLAMARE at 0400/D-1, routing in accordance with Convoy Plan, Annex "I". After passing through Point NH, subsequent movements in accordance with Approach Plan issued by C.T.F. 85.

Sail forces comprising Convoy FSS-2 from BIZERTA on D-2. Routing as prescribed in Convoy Plan, Annex "I". Convoy FSS-2X will sail from BIZERTA immediately after departure of Convoy FSS-2; 9 LST and 6 LCI(L) will join Convoy FSS-2X from Convoy FSS-2Y at 0800/D-1. Convoy TSF-1X will join Convoy FSS-2 at Point PR at 0730/D-1. Prior to dark on D-1 Convoy FSS-2X will proceed independently to approach Southern Attack Force area. After passing through Point NH, Convoy FSS-2 execute Approach Plan issued by C.T.F. 85.

Sail forces comprising Convoy FSS-2X from BIZERTA on D-2 immediately after departure of Convoy FSS-2. Routing in accordance with Convoy Plan, Annex "I". At 0800/D-1 Convoy FSS-2X will be joined by 9 LST and 6 LCI(L) from Convoy FSS-2Y. Convoy FSS-2X will be released prior to dark on D-1 in order to execute Approach Plan issued by C.T.F. 81.

Sail forces comprising Convoy TSF-1X from PALERMO on D-1. Route in accordance with Convoy Plan, Annex "I". Rendezvous with Convoy FSS-2 at Point PR at 0730/D-1.

Sail forces comprising Convoy TSS-3 from TRIPOLI on D-2. Route in accordance with Convoy Plan, Annex "I". Rendezvous with Convoy FSS-3 at Point NG at 1200/D, thereafter proceeding in company. Thence proceed direct to Northern Attack area, arriving at 0530/D plus 1 unless diverted by C.W.N.T.F.

Sail forces comprising Convoy FSS-3 from BIZERTA on D-1. Route in accordance with Convoy Plan, Annex "I". Rendezvous with Convoy TSS-3 at Point NG at 1200/D, thereafter proceeding in company. Thence proceed direct to Northern Attack Area, arriving at 0530/D plus 1 unless diverted by C.W.N.T.F.

H. K. HEWITT,
Vice Admiral, U. S. Navy,
Commander Western Naval Task Force.

DISTRIBUTION:
Same as OpPlan No. 7-43

H. K. Hewitt
J. M. BOIT,
Commander, U.S.N.R.
Flag Secretary.

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ANNEX "I" TO OPERATION PLAN NO. 7-43

CONVOY PLAN

NAMING OF CONVOYS

Convoys for operation AVALANCHE will be named as shown below. Convoy names consist of three letters followed by a number: the third letter will be F, M, or S, denoting Fast, Medium, and Slow respectively. Where convoys comprise a number of sections which make rendezvous prior to reaching the final destination, the first section carries the normal designation, the second section is denoted by the letter "X" following the convoy number, the third section, the letter "Y", and so on.

AVALANCHE Convoys are designated as follows:

NORTH AFRICA to SALERNO	- - - - -	NS
SALERNO to NORTH AFRICA	- - - - -	SN
TUNISIA to SALERNO	- - - - -	FS
SALERNO to TUNISIA	- - - - -	SF
TRIPOLI to SALERNO	- - - - -	TS
SALERNO to TRIPOLI	- - - - -	ST
SICILIAN PORTS to SALERNO	- - - - -	PS
SALERNO to SICILIAN PORTS	- - - - -	SP

Other MEDITERRANEAN Convoys are designated as follows:

ALEXANDRIA to MALTA or SICILY	- - - - -	MW
MALTA or SICILY to ALEXANDRIA	- - - - -	ME
GIBRALTAR or NORTH AFRICA to EAST SICILY	- - - -	TE
EAST SICILY to NORTH AFRICA or GIBRALTAR	- - - -	ET
UNITED KINGDOM to NORTH AFRICA or SICILY	- - - -	KM
SICILY or NORTH AFRICA to UNITED KINGDOM	- - - -	MK
GIBRALTAR to ALEXANDRIA	- - - - -	GTX
ALEXANDRIA to GIBRALTAR	- - - - -	XTG

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ASSAULT CONVOYS

NSF-1

This convoy originates in ORAN, sailing on D-4.

Convoy Composition:

APA 26	U.S.S. SAMUEL CHASE (C.T.F. 81)
APA 28	U.S.S. CHARLES CARROLL
APA 30	U.S.S. THOMAS JEFFERSON
XAP 90	U.S.S. JAMES O'HARA
AKA 1	U.S.S. ARCTURUS
AKA 2	U.S.S. PROCYON
APA 5	U.S.S. BARNETT
APA 13	U.S.S. JOSEPH DICKMAN
XAP 69	U.S.S. ELIZABETH STANTON
XAP 71	U.S.S. LYON
XAP 89	U.S.S. FREDERICK FUNSTON
AKA 14	U.S.S. OBERON
AKA 15	U.S.S. ANDROMEDA
(LST)	H.M.S. BOXER
(LST)	H.M.S. BRUISER
(LST)	H.M.S. THRUSTER
LSI(L)	S.S. ORONTES
LSI(L)	S.S. MARNIX VAN ST. ALDEGONDE
LSI(L)	S.S. DUCHESS OF BEDFORD

Escort Composition:

CL-41	U.S.S. PHILADELPHIA
CL-42	U.S.S. SAVANNAH
CL-47	U.S.S. BOIS
CL	H.M.S. COLOMBO
DD419	U.S.S. WAINWRIGHT
DD403	U.S.S. TRIPPE
DD404	U.S.S. RHIND
DD405	U.S.S. ROWAN
DD431	U.S.S. PLUNKETT
DD424	U.S.S. NIBLACK
DD421	U.S.S. BENSON
DD423	U.S.S. GLEAVES
DD422	U.S.S. MAYO
DD437	U.S.S. WOOLSEY
DD438	U.S.S. LUDLOW
DD155	U.S.S. COLE
AM112	U.S.S. SEER
AM115	U.S.S. SKILL
AM116	U.S.S. SPEED
AM117	U.S.S. STRIVE
AM118	U.S.S. STEADY
AM119	U.S.S. SUSTAIN
AM104	U.S.S. PILOT
AM107	U.S.S. PREVAIL

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NSF-1X

On D-3 the following vessels, sailing from ALGIERS, will rendezvous with NSF-1 in accordance with Rendezvous and Departure Plan, Annex G.

Convoy Composition:

AGC 4 U.S.S. ANCON (C.W.N.T.F.)
? H.M.S. ULSTER QUEEN

Escort Composition:

DD439 U.S.S. EDISON
DD453 U.S.S. BRISTOL
DD442 U.S.S. NICHOLSON

The speed of advance of NSF-1 is 13 knots. The route is prescribed, as follows:

<u>POINT</u>	<u>POSITION</u>		<u>TIME</u>
NA	35°53'N	00°38'W	
NB	37°01'N	01°12'E	1130/D-3
NC	37°26'N	06°26'E	
ND	37°18'N	08°54'E	
NE	37°28'N	09°44.6'E	
AZ	37°21'N	09°56.6'E	2130/D-2
BA	37°17.6'N	10°05.8'E	
BB	37°15'N	10°25.5'E	2330/D-2
BC	37°40'N	11°22'E	
BD	38°08'N	11°51'E	
BE	38°20'N	12°28'E	
NF	38°32'N	14°10'E	
NQ	39°30'N	14°10'E	1930/D-1

Thence routed in accordance with Approach Plan issued by C.T.F. 81.

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TSF-1

This convoy originates in TRIPOLI, sailing on D-3.

Convoy Composition:

AGC	H.M.S. HILARY (C.T.F. 85)
LSI(L)	H.M.S. GLENGYLE
LSI(L)	S.S. SOBIESKI
LSI(L)	S.S. DEVONSHIRE
LSI(M)	H.M.S. ROYAL ULSTERMAN
LSI(M)	H.M.S. ROYAL SCOTSMAN
LSI(M)	H.M.S. ULSTER MONARCH
LSI(M)	H.M.S. PRINCESS BEATRIX
LSI(S)	H.M.S. PRINCE LEOPOLD
LSI(S)	H.M.S. PRINCESS CHARLOTTE

Escort Composition:

AA/CL	H.M.S. DELHI
AA/CL	H.M.S. MAURITIUS)
AA/CL	H.M.S. UGANDA)
AA/CL	H.M.S. ORION)
DD	H.M.S. NUBIAN)
DD	H.M.S. LAFOREY)
DD	H.M.S. LOOKOUT)
DD	H.M.S. LOYAL)
DD	H.M.S. TARTAR)
DD(Hunt)	H.M.S. DULVERTON
DD(Hunt)	H.M.S. TETCOTT
DD(Hunt)	H.M.S. BELVOIR
DD(Hunt)	H.M.S. BEAUFORT
DD(Hunt)	H.M.S. EXMOOR
DD(Hunt)	H.M.S. PINIOS
	(H.M.S. ALCACORE
	(H.M.S. ACUTE
12th MS Flot.	(H.M.S. MUTINE
	(H.M.S. ESPIEGLE
	(H.M.S. FLY
	(H.M.S. CIRCE
	(H.M.S. CALMUS

The speed of advance of TSF-1 is 11 knots. The route is prescribed, as follows:

<u>POINT</u>	<u>POSITION</u>	<u>TIME</u>
	TRIPOLI	1300/D-3
TA	32°55'N 13°12.4'E	
TB	32°59'N 13°05.3'E	
TC	33°09'N 12°55'E	
PN	34°30'N 14°00'E	

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<u>POINT</u>	<u>POSITION</u>	<u>TIME</u>
PO	35°10'N 13°50'E	
PP	36°49'N 12°07'E	
PQ	37°12'N 11°33'E	
TK	37°46'N 11°33'E	
TL	38°13'N 11°55'E	
TM	38°15'N 12°30'E	0630/D-1
PR	38°39'N 13°17'E	
NJ	39°48'N 13°34'E	1715/D-1

On Force "K" joining Convoy TSF-1, Hunt Class destroyers are to be detached in groups to fuel at PALERMO and rejoin the convoy. After passing through Point NJ, subsequent movements in accordance with Approach Plan issued by C.T.F. 85.

TSF-1X

This convoy originates in PALERMO, sailing on D-1.

Convoy Composition:

LSI(S)	H.M.S. PRINCE CHARLES)
LSI(S)	H.M.S. PRINCE ALBERT)
LSI(S)	H.M.S. PRINCESS ASTRID)
8 LCI(L)		Rangers and Commandos embark at PALERMO.

Escort Composition:

DD(Hunt)	H.M.S. LEDBURY
DD(Hunt)	H.M.S. BLACKMORE

The 8 LCI(L) in this convoy are from Convoy FSS-1 arriving PALERMO D-2.

The departure and speed of advance of TSF-1X will be selected to enable rendezvous with FSS-2 at Point PR at 0730/D-1. TSF-1X will be released by S.O.P. of Convoy FSS-2 before dark in order to execute Approach Plan of C.T.F. 85. This plan should provide for the assembly of the 2 LCT from Convoy FSS-1 carrying Ranger and Commando equipment.

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NSM-1

This convoy originates in ORAN, sailing on D-3.

Convoy Composition:

CM	U.S.S. WEEHAWKEN (C.T.G. 80.5)
CM	U.S.S. SALEM
CM	U.S.S. KEOKUK

Escort Composition:

DD(Hunt)	H.M.S. BLENCAHRA
DD(Hunt)	H.M.S. OAKLEY
DL(Hunt)	H.M.S. HAMBLEDON

The speed of advance of NSM-1 is 10 knots. The route is prescribed as follows:

<u>POINT</u>	<u>POSITION</u>		<u>TIME</u>
	ORAN		D-3
NA	35°53'N	00°38'W	
NB	37°01'N	01°12'E	
NC	37°26'N	06°26'E	
ND	37°18'N	08°54'E	
NE	37°28'N	09°44.6'E	
BA	37°17.6'N	10°05.8'E	
BB	37°15'N	10°25.5'E	
BC	37°40'N	11°22'E	
BD	38°08'N	11°51'E	
NG	38°37'N	13°22'E	1700/D Day
CB	39°51'N	14°52'E	

Convoy NSM-1 will stage at BIZERTE until called forward to assault area by C.W.N.T.F. Thence as directed by C.W.N.T.F.

CRAFT CONVOYSTSS-1

This convoy originates in TRIPOLI, sailing on D-6.

Convoy Composition:

33 LCT
4 LCF
4 LCG
2 LCR

NOTE: LCT 164 and LCT 169 are to be sailed to rendezvous with Convoy TSS-1 at 2000/D-5 in position 35°50'N, 11°13'E.

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Escort Composition:

H.M.S. ROTHESAY
H.M.S. FELIXSTOWE
6 HDML
4 MMS
4 BYMS

The speed of advance of TSS-1 is 5 knots. The route is prescribed as follows:

<u>POINT</u>	<u>POSITION</u>		<u>TIME</u>
TA	32°55'N	13°12.4'E	0600/D-6
TB	32°59'N	13°05.3'E	
TC	33°09'N	12°55'E	
TD	34°44'N	12°00'E	
TE	35°04'N	11°57'E	
TF	35°47'N	11°14'E	
TG	36°31.6'N	11°00'E	
TH	36°51.6'N	11°14.6'E	
TJ	36°59'N	11°33'E	1200/D-4
TK	37°42'N	11°33'E	
TL	38°03'N	11°55'E	2400/D-4
TM	38°15'N	12°30'E	
BF	38°20'N	13°29'E	
BH	38°31'N	13°43'E	
	TERMINI		1900/D-3

At TERMINI Convoy TSS-1 is joined by 24 LCI(L) and 6 minesweeping MLs ex-TSM-1. All MLs and HDMLs form a line at TERMINI.

	Sail from TERMINI		1730/D-2
BH	38°11'N	13°43'E	
NN	38°54'N	14°03'E	
NL	39°30'N	14°03'E	1130/D-1

Thence in accordance with Approach Plan issued by C.T.F. 85.

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TSM-1

This convoy originates in TRIPOLI, sailing on D-4.

Convoy Composition:

34 LCI(L)

Escort Composition:

DD(Hunt) H.M.S. BROCKLESBY
10 ML (3rd ML Flotilla including MLs 121, 131, 168, 338
fitted M/S).

The speed of advance during passage to TERMINI is 10 knots. The prescribed route is as follows:

<u>POINT</u>	<u>POSITION</u>		<u>TIME</u>
	TRIPOLI		0600/D-4
TA	32°55'N	13°12.4'E	
TB	32°59'N	13°05.3'E	
TC	33°09'N	12°55'E	
TD	34°44'N	12°00'E	
TE	35°04'N	11°57'E	
TF	35°47'N	11°14'E	
TG	36°31.6'N	11°00'E	
TH	36°51.8'N	11°14.6'E	
TJ	36°59'N	11°33'E	
TK	37°42'N	11°33'E	1700/D-3
TL	38°03'N	11°55'E	
TM	38°15'N	12°30'E	
BF	38°20'N	13°29'E	
BH	38°11'N	13°43'E	
	TERMINI		0600/D-2

All MLs will be fueled at TERMINI.

At TERMINI 24 LCI(L) leave convoy TSM-1 and sail from TERMINI with convoy TSS-1 at 1800/D-2.

At TERMINI Convoy TSM-1 is joined by 4 HDMs escorting 9 LST of which 6 LST are loaded with R.A.F. equipment, and 3 with X Corps. These craft with R.A.F. equipment have been staged to TERMINI from MILAZZO on D-2.

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Convoy TSM-1 sails from TERMINI at a speed of advance of 8 knots by the following route:

<u>POINT</u>	<u>POSITION</u>		<u>TIME</u>
	TERMINI		0600/D-1
BH	38°11'N	13°43'E	
NT	38°20'N	13°34'E	
NG	38°37'N	13°22'E	1130/D-1
NK	39°42'N	13°42'E	2030/D-1

Convoy TSM-1 rendezvous with TSS-2 at Point NG at 1130/D-1. Movements after passing Point NK in accordance with Approach Plan, issued by C.T.F. 85.

When the 6 LSTs carrying R.A.F. stores are unloaded, they will be sailed for MILAZZO under escort assigned by C.W.N.T.F. These 6 craft, together with the 2 LST arriving in Convoy FSS-2, will operate a shuttle service carrying stores between MILAZZO and the beaches until the R.A.F. build-up is complete.

FSS-1

This convoy originates in BIZERTA, sailing on D-4.

Convoy Composition:

31 LCT (Br. 46th Div.)
6 LCT (U.S. 36th Div. armor)
3 LCF
5 LCG
1 LCR

Escort Composition:

1 PC
4 SC
3 YMS

The speed of advance of FSS-1 is 5 knots. The route prescribed is as follows:

<u>POINT</u>	<u>POSITION</u>		<u>TIME</u>
	BIZERTA		0700/D-4
AZ	37°21'N	09°56.6'E	
BA	37°17.6'N	10°05.8'E	
BB	37°15'N	10°25.5'E	
BC	37°40'N	11°22'E	
BD	38°08'N	11°51'E	

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<u>POINT</u>	<u>POSITION</u>	<u>TIME</u>
BE	38°20'N 12°28'E	
BX	38°16'N 12°55'E	1600/D-3
	CASTELLAMARE BAY	1900/D-3

If vessels are diverted to PALERMO, the following route from Point BE is prescribed:

BF	38°20'N 13°29'E
BG	38°08.2'N 13°29'E
	PALERMO

✓ LCT will be fuelled at CASTELLAMARE BAY or PALERMO!

Two LCTs will proceed to PALERMO, embark Ranger and Commando equipment and rejoin FSS-1 at CASTELLAMARE. These 2 LCTs should rendezvous with TSF-1X prior to landing of Rangers and Commandos.

Convoy FSS-1, with a speed of advance of 5 knots, will follow the following route from CASTELLAMARE BAY to the assault area:

<u>POINT</u>	<u>POSITION</u>	<u>TIME</u>
	CASTELLAMARE BAY	1000/D-2
BX	38°16'N 12°55'E	
NM	38°56'N 13°57'E	
NR	39°32'N 13°57'E	1000/D-1

The 6 LCT (ex-HUSKY) loaded with U.S. 36th Div. armor, will be detached from FSS-1 at the discretion of C.T.F. 85 in order that these craft may reach SOUTHERN Attack Force initial transport area by 0600/D.

After passing through Point NR, subsequent movements of FSS-1 in accordance with Approach Plan issued by C.T.F. 85.

TSS-2

This convoy originates in TRIPOLI, sailing on D-3.

Convoy Composition:

MT/Store Ship	20 LST
MT/Store Ship	S.S. MIDDLESEX TRADER
MT/Store Ship	S.S. MARVIK
MT/Store Ship	S.S. CITY OF EVANSVILLE
AO	S.S. ALEXANDRE ANDRE
AOG (cased)	S.S. LOCHEE (from SOUSSE)
AT	S.S. HENGIST

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Escort Composition:

AA Ship H.M.S. ALYNBANK
DD(Hunt) H.M.S. QUINTOCK
29th Group (Trawler FOXTROT
(Trawler GAVOTTE
(Trawler TANGO
(Trawler PIROUETTE
(Trawler ENSAY
22nd A/S M/S Gr (Trawler MOUSA
(Trawler SHIPPY
(Trawler ST. KILDA
HDMLe 1270, 1271, 1297, 1301
3rd Aux. A/S Gr (Trawler KING SOL
(Trawler STELLA CIRINA
(Trawler VISENDA

The speed of advance of TSS-2 is 8 knots. The route is prescribed as follows:

POINT	POSITION	TIME
TA	32°55'N 13°12.4'E	0500/D-3
TB	32°59'N 13°05.3'E	
TC	33°09'N 12°55'E	
TD	34°44'N 12°00'E	
TE	35°04'N 11°57'E	
TF	35°47'N 11°14'E	
TG	36°31.6'N 11°00'E	
TH	36°51.6'N 11°14.6'E	
TJ	36°59'N 11°33'E	
TK	37°42'N 11°33'E	2300/D-2
TL	38°03'N 11°55'E	
TM	38°15'N 12°30'E	
NG	38°37'N 13°22'E	1130/D-1
NK	39°42'N 13°42'E	2030/D-1

Cased Petrol Carrier LOCHEE sails from SOUSSE and rendezvous with TSS-2 at 0300/D-2 at the seaward end of SOUSSE Approach Channel in position 35°56'N., 11°51'E.

Five LST, which had been sailed earlier from TRIPOLI to SOUSSE to collect 5 pontoons, will join TSS-2 at this time also.

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MLs and HMLs escorting Convoy TSS-2 are to be detached to PALERMO to fuel on D-1.

Convoy TSS-2 rendezvous with Convoy TSM-1 at Point NG at 1130/D-1. After passing through Point NK, subsequent movements in accordance with Approach Plan issued by C.T.F. 85.

FSM-1

This convoy originates in BIZERTA, sailing on D-3.

Convoy Composition:

44 LCI(L)

Escort Composition:

DD(Hunt) H.M.S. BLANKNEY
10 SC
6 YMS

The speed of advance is 10 knots. The prescribed route is as follows:

<u>POINT</u>	<u>POSITION</u>		<u>TIME</u>
	BIZERTA		1300/D-3
AZ	37°21'N	09°56.6'E	
BA	37°16.6'N	10°05.8'E	
BB	37°15'N	10°25.5'E	1700/D-3
BC	37°40'N	11°22'E	
BD	38°08'N	11°51'E	0100/D-2
BE	38°20'N	12°28'E	
BX	38°16'N	12°55'E	
	CASTELLAMARE BAY		0800/D-2

If entrance to PALERMO is required the route will be as follows:

BE	38°20'N	12°28'E
BF	38°20'N	13°29'E
BG	38°08.2'N	13°29'E
PALERMO		

8 LCI(L) from Convoy FSM-1 are staged to PALERMO on D-2 where they will embark Rangers and Commandos and will sail from PALERMO in Convoy TSF-1X on D-1.

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Convoy FSM-1 upon taking departure will take the following route:

<u>POINT</u>	<u>POSITION</u>		<u>TIME</u>
	CASTELLAMARE BAY		0400/D-1
BX	38°16'N	12°55'E	0800/D-1
PR	38°39'N	13°17'E	
NH	39°46'N	13°37'E	1600/D-1

On D-1, ML-338 will join Convoy FSM-1 from Convoy TSM-1.

After passing through Point NH, Convoy FSM-1 proceed in accordance with Approach Plan issued by C.T.F. 85.

FSM-1X

This convoy originates in BIZERTA, sailing on D-3.

Convoy Composition:

DD U.S.S. KNIGHT (C.T.G. 80.4)
Dutch Gunboat SOEMBA
Dutch Gunboat FLORES
4 MTB
4 SC
ML 554, 555, 556, 557, 559, 560
1 PT
10 ARB
16 PT (C.T.G. 80.2)

The speed of advance is 10 knots. The prescribed route is as follows:

<u>POINT</u>	<u>POSITION</u>		<u>TIME</u>
	BIZERTA		1300/D-3
AZ	37°21'N	09°56.6'E	
BA	37°17.6'N	10°05.8'E	
BB	37°15'N	10°25.5'E	
BC	37°40'N	11°22'E	
BD	38°08'N	11°51'E	
BE	38°20'N	12°23'E	
BF	38°20'N	13°29'E	
BG	38°08.2'N	13°29'E	
	PALERMO		1200/D-2

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Convoy FSM-1X take departure from PALERMO at 0315/D-1, speed of advance 9 knots, on the following route:

<u>POSITION</u>	<u>TIME</u>
38°12'N 13°27'E	0415/D-1
38°24'N 13°25.5'E	0600/D-1
38°42'N 13°23'E	0800/D-1
39°00.5'N 13°20.5'E	1000/D-1
39°36'N 13°17'E	1400/D-1
40°00'N 13°15'E	1640/D-1

C.T.G. 80.4 provide 4 SC as escorts for Convoy FSS-2Y sailing PALERMO at 0345/D-1 to rendezvous at Point PR with Convoy FSS-2X. Upon making rendezvous SCs subsequent movements as directed by C.T.G. 80.4.

Subsequent movements of Convoy FSM-1X as directed by C.T.G. 80.4. T.G. 80.2 will be released by C.T.G. 80.4 at such time as to ensure T.G. 80.2 reaching station at the proper time for the execution of Screening Directive, Annex "K".

FSS-2Y

This convoy originates at PALERMO, sailing on D-1.

Convoy Composition:

9 LST) ex-BAYTOWN; carry 1 RCT of
6 LCI(L)) 45th Div. as 5th Army Reserve.

Escort Composition:

4 SC (to be assigned by C.T.G. 80.4)

The speed of advance is 8 knots. The prescribed route is as follows:

<u>POINT</u>	<u>POSITION</u>	<u>TIME</u>
	PALERMO	0345/D-1
	38°12'N 13°27'E	
PR	38°39'N 13°17'E	0800/D-1

At Point PR, Convoy FSS-2Y joins Convoy FSS-2X, the 4 SC in escort group proceeding in accordance with orders issued previously by C.T.G. 80.4.

Upon arrival in SOUTHERN Attack Force area, the Reserve Group carrying the RCT of the 45th Division will close on ANCON and stand by for orders from C.W.N.T.F.

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FSS-2

This convoy originates in BIZERTA, sailing on D-2.

Convoy Composition:

AGC	U.S.S. BISCAYNE
Monitor	H.M.S. ROBERTS
AT	U.S.S. MERRIMAC
AT	U.S.S. NAUSET
Naval Coaster	S.S. BRITTANY
MT/Store Ship	S.S. ALCINOUS
MT/Store Ship	S.S. PROMETHEUS
Army Coaster	S.S. BOLLSTA
AOG	S.S. WELSH COAST
Water Carrier	S.S. EMPIRE COPPIE
	20 LST

Escort Composition:

DD(Hunt)	H.M.S. MENDIP
DD(Hunt)	H.M.S. BRECON
	5 PC
	4 SC
	(H.M.S. RHYL)
	(H.M.S. BRIXHAM)
13th MS Flot.	(H.M.S. POLRUAN)
	(H.M.S. BUDE)
	(H.M.S. CLACTON)
	(H.M.S. STORNOWAY)

The speed of advance is 8 knots. The prescribed route is as follows:

<u>POINT</u>	<u>POSITION</u>	<u>TIME</u>
	BIZERTA	0630/D-2
AZ	37° 21'N 09° 56.6'E	
BA	37° 17.6'N 10° 05.8'E	
BB	37° 15'N 10° 25.5'E	
BC	37° 40'N 11° 22'E	
BD	38° 06'N 11° 51'E	
BE	38° 20'N 12° 28'E	
PR	38° 39'N 13° 17'E	0730/D-1
NH	39° 46'N 13° 37'E	1600/D-1

Convoy TSF-1X will join Convoy FSS-2 at Point PR at 0730/D-1.

Convoy FSS-2 is accompanied by Convoy FSS-2X; the latter is joined by 9 LST and 6 LCI(L) at 0800/D-1 ex-Convoy FSS-2Y.

Convoy FSS-2X will be released before dark on D-1 in order that it may execute the Approach Plan issued by C.T.F. 81.

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FSS-2X

This convoy originates in BIZERTA, sailing on D-2 immediately after FSS-2.

Convoy Composition:

Monitor	H.M.S. ABERCROMBIE
LSC	H.M.S. EMPIRE CHARMIAN
LSG	H.M.S. DERWENTDALE
AT	U.S.S. HOPI
AT	U.S.S. MORENO
	16 LST
	2 LST (with NAAF equipment)
	20 LCI(L)

Escort Composition:

DD199	U.S.S. DALLAS
DD153	U.S.S. BERNADOU
	8 PC
	12 YMS

The speed of advance is 8 knots. The prescribed route is as follows:

<u>POINT</u>	<u>POSITION</u>		<u>TIME</u>
	BIZERTA		0700/D-2
AZ	37°21'N	09°56.6'E	
BA	37°17.6'N	10°05.8'E	
BB	37°15'N	10°25.5'E	
BC	37°40'N	11°22'E	
BD	38°08'N	11°51'E	
BE	38°20'N	12°28'E	
PR	38°39'N	13°17'E	0800/D-1
NH	39°46'N	13°37'E	1630/D-1

Thirteen LST are loaded with one Med. Tk. Bn. and DUKWS; 3 LST and 20 LCI(L) carry elements of the 82nd Airborne Division.

Two LST of Convoy FSS-2X carry NAAF equipment. When unloaded, these 2 LSTs will operate shuttle service carrying aviation stores between MILAZZO and the beaches as outlined in the Follow-up Convoy Program.

At 0800 on D-1 day Convoy FSS-2Y comprising 9 LSTs and 6 LCI(L), carrying 1 RCT of the 45th Infantry Division, will join Convoy FSS-2X at Position PR. These troops constitute the Floating Reserve of the 5th Army.

Convoy FSS-2X will be released before dark on D-1 in order to execute the Approach Plan of C.T.F. 81.

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AMMEX 1 to
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FIRST FOLLOW-UP CONVOYS

TSS-3

This convoy originates in TRIPOLI, sailing on D-2.

Convoy Composition:

17 LST

Escort Composition:

A/S Trawler 4 ML
A/S Trawler REIGHTON WYKE
A/S Trawler MAN OF WAR

The speed of advance is 8 knots. The prescribed route is as follows:

<u>POINT</u>	<u>POSITION</u>	<u>TIME</u>
	TRIPOLI	0600/D-2
TA	32°55'N 13°12.4'E	
TB	32°59'N 13°05.3'E	
TC	33°09'N 12°55'E	
TD	34°44'N 12°00'E	
TE	35°04'N 11°57'E	
TF	35°47'N 11°14'E	
TG	36°31.6'N 11°00'E	
TH	36°51.6'N 11°14.6'E	
TJ	36°59'N 11°33'E	
TK	37°42'N 11°33'E	
TL	38°03'N 11°55'E	
TM	38°15'N 12°30'E	
NG	38°37'N 13°22'E	1200/D
CB	39°51'N 14°53'E	0100/D plus 1

Thence by direct route to Northern Attack Area arriving 0530/D plus 1 unless diverted by Commander Western Naval Task Force.

Convoy TSS-3 will rendezvous with Convoy FSS-3 at Point NG at 1200/D day, thereafter proceeding in company.

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FSS-3

This convoy originates in BIZERTA, sailing on D-1.

Convoy Composition:

18 LST
Waterboat ALETTA

Escort Composition:

2 PC
4 SC

The speed of advance is 8 knots. The prescribed route is as follows:

<u>POINT</u>	<u>POSITION</u>	<u>TIME</u>
	BIZERTA	1100/D-1
AZ	37°21'N 09°56.6'E	
BA	37°17.6'N 10°05.8'E	
BB	37°15'N 10°25.5'E	
BC	37°40'N 11°22'E	
BD	38°08'N 11°51'E	
BE	38°20'N 12°28'E	
NG	38°37'N 13°22'E	1200/D
CB	39°51'N 14°53'E	0100/D plus 1

Thence by direct route to Northern Attack Area arriving 0530/D plus 1 unless diverted by Commander Western Naval Task Force.

Convoy FSS-3 will rendezvous with Convoy TSS-3 at Point NG at 1200/D, thereafter proceeding in company.

AIR/SEA RESCUE CONTROL SHIP

H.M.S. ANTWERP sails from BIZERTA on D-2 conforming to the following route.

<u>POINT</u>	<u>POSITION</u>	<u>TIME</u>
	BIZERTA	1730/D-2
AZ	37°21'N 09°56.6'E	
BA	37°17.6'N 10°05.8'E	
BB	37°15'N 10°25.5'E	

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<u>POINT</u>	<u>POSITION</u>	<u>TIME</u>
BC	37°40'N	11°22'E
BD	38°08'N	11°51'E
PR	38°39'N	13°17'E
CK	39°15'N	14°00'E
		1000/D-1

ANTWERP will act under the orders of Commander-in-Chief MEDITERRANEAN, as Air-Sea Rescue Control Ship in the area between 39°N and 39°30'N, and 13°40'E and 14°10'E. In addition she will refuel high speed launches and possibly WALRUS Aircraft.

From 2000/D-1 to 2200/D-1, ANTWERP will be in position 39°26'N., 13°14'E, acting as a Beacon Ship for transport aircraft.

SPECIAL OPERATIONAL REQUIREMENTS

For Operation AVALANCHE all Naval ships and craft are assigned to Commander Western Naval Task Force for allocation, distribution and for such tasks as he may assign.

To accomplish methodically this operation ships and craft have been based at ORAN, ALGIERS, TRIPOLI, BIZERTA and SICILIAN Ports for mounting Army components.

In order to economize in the use of escort vessels and to meet the major shipping requirements and some special requirements it has been necessary to diverge in some instances from normal convoy procedures. These exceptions are outlined in the following paragraphs.

RANGER AND COMMANDOS

Craft assigned to the Ranger and Commandos consist of 3 LSI(S), 8 LCI(L) and 2 LCT. The personnel and equipment is loaded at PALERMO. To accomplish this task the 3 LSI(L) are originally based at PALERMO, 8 LCI(L) are released from Convoy FSS-1 and the 2 LCT from Convoy FSS-1 to proceed to PALERMO for loading.

The 3 LSI(S)'s and 8 LCI(L)'s form as Convoy TSF-1X and depart PALERMO on D-1 joining Convoy FSS-2 near USTICA. The 2 LCT's depart PALERMO make rendezvous with Convoy FSS-1 at CASTELLOMARE and depart with that convoy on D-2.

Prior to dark on D-1 Convoy TSF-1X consisting of 3 LSI(S), 8 LCI(L) and 3 LCT is reformed by CTF 85 in order to carry out the Ranger and Commando mission.

HMS BOXER, BRUISER, THRUSTER - 3 LST (fast)

Three LSTs with a speed of 18 knots have been assigned to CTF 81 and sail in Convoy NSF-1. Upon completion of first unloading these craft are assigned to a shuttle service between SICILY and the assault beaches for the purpose of transporting aviation supplies and Army supplies and equipment. The first turn round will be loaded at MILAZZO; subsequent loadings at PALERMO.

Ex-BAYTOWN CRAFT

From craft remaining after Operation BAYTOWN, 9 LST and 6 LCI(L) have been assigned to C.W.N.T.F. These craft mount one RCT of 45th Division as 5th Army Reserve in PALERMO and as Convoy FSS-2Y depart PALERMO and makes rendezvous with FSS-2X North of SICILY. Convoy FSS-2X is released on D-1 in time to execute Approach Plan as directed by C.T.F. 81.

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~~APPENDIX I to~~
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LST FOR AIR FORCE EQUIPMENT

Two LST in Convoy FSS-2X carry NAAF equipment, which were loaded in BIZERTA. After unloading, these 2 LST will be joined by 6 LSTs ex-TSM-1 which have previously been loaded with RAF equipment at MILAZZO. These 8 LST will then operate a shuttle service carrying stores between MILAZZO and the beaches.

ML-338

On D-1 ML-338 will leave Convoy TSM-1 and join Convoy FSM-1. This ML will act as pilot for Minesweeping Group in the 46th Division transport and assault beach area.

BEACON SHIPS

In order to provide beacons for airborne troops, CTF 80.4 will detail one ML to be in position Latitude forty degrees fifty-eight minutes North, Longitude thirteen degrees forty-one minutes East from 2100/D-1 to 2300 D-1. At 2300/D-1 this craft proceed and rejoin CTF 80.4.

CTF 85 will detail one destroyer (Hunt) to be in position Latitude forty degrees zero nine minutes North, Longitude thirteen degrees fifteen and one half minutes East at 2020/D-1 and remain on station as provided in Air Beacon Directive Annex O to Commander Western Naval Task Force Operation Plan 7-43.

AVAILABILITY OF CRAFT

The number of craft shown in OpPlan No. 7-43 are based on the original 100% operationally available. Any losses prior or during the assault must be borne by the Task Force Commander concerned.

RELIEF OF CRAFT

Authorities at Allied Force Headquarters are requested to make every effort to sail additional M/T Ships with stores and other build-up equipment in order to release craft for overhaul and other subsequent important operations.

EVACUATION OF PRISONERS OF WAR

Evacuation of Prisoners of War is not to delay the sailing of ships or craft.

Prisoners may be embarked in LCI(L)'s and LSTs returning to North African ports. The Army will provide troops as guards.

No prisoners shall be embarked in Cargo Ships, in Combat loaders or in vessels carrying Allied lying casualties.

RETURN CONVOYS

Sailing authorities notify Commander-in-Chief MEDITERRANEAN - MEDITERRANEAN Air Command - NORTH AFRICAN COASTAL AIR FORCE and NORTH AFRICAN TACTICAL AIR FORCE of number of ships in escort, destination, ETA and speed of advance. Sailing authorities include convoy code word and radio call signs in all convoy sailing orders.

H. K. HEWITT,
Vice Admiral, U. S. Navy,
Commander Western Naval Task Force.

APPENDIX:

1. Follow-up Convoy Program.
2. Naval Operations in the MEDITERRANEAN.

DISTRIBUTION:

Same as OpPlan 7-43 except
restricted distribution of
Appendix 2.

H. K. Hewitt
H. K. HEWITT,
Commander, U.S.N.R.

Flag Secretary.

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APPENDIX 2 TO ANNEX "I" OF N.C.W.T.F. OP PLAN NO. 7-43

NAVAL OPERATIONS IN THE MEDITERRANEAN

VISIBILITY

In the MEDITERRANEAN mild weather with high visibility is the rule. Due to this fact and to relative geographical positions, it is possible for the enemy to make a concentration of submarines and/or aircraft in most areas.

ENEMY METHODS IN MEDITERRANEAN

The conditions of submarine and air attack in the WESTERN MEDITERRANEAN are in many cases fundamentally different from those in the ATLANTIC. The main points in the WESTERN MEDITERRANEAN are:

- (1) High degree of vigilance and readiness of AA armament reaching maximum at dusk, dawn, and in moonlight.
- (2) Use of smoke when threatened by torpedo-bomber attack.
- (3) U-boats do not hunt in packs so need for escorts astern is much reduced.
- (4) No restrictions on use of all forms of R.D.F. (Radar) when air attack is probable (i.e., anywhere east of ORAN)
- (5) Blue warning from NORTH AFRICAN coast cannot be relied on since AXIS planes have taken to flying low and are often missed by coastal chain R.D.F. (Radar).

AIRCRAFT ATTACKS WITH FLARE ILLUMINATION

Ordinarily the enemy drops flares from the beam towards the bow on one side, the attacking planes then delivering the attack from the opposite bow.

To reduce effectiveness of flare illumination use evasive tactics by (1) steering towards the flares whenever possible, or (2) if flares are on the quarter, turn away.

If the flares are dropped at some distance (over 5 miles) from own ships, a turn away will increase the enemy's error.

USE OF SMOKE DURING AIR ATTACK

Attention is drawn to the value of smoke as a protection against dusk or moonlight torpedo-bomber attacks on convoys. Convoys need not necessarily be hidden completely, provided that the horizon is sufficiently obscured to embarrass low-flying aircraft.

Whenever possible warning will be given if torpedo attack is likely, but present enemy tactics generally defeat shore R.D.F. (Radar). Escorts must therefore expect attack without warning at dusk, dawn, and in moonlight.

In these conditions Escort Commanders should arrange that at least one escort at a time is making smoke preferably on the dark side of the convoy. If approaching enemy aircraft are detected, all escorts should make smoke, employing both black and white smoke.

BALLOONS

During the day, when attack by aircraft appears more likely than attack by submarines, balloons should be flown at operational height.

During the day, and in clear weather, when attack by submarine is considered more probable than attack by aircraft, balloons should be hauled down as low as possible in order to reduce the risk of being observed at a great distance by enemy submarines.

During the night, from one half hour before sunset until one half hour after sunrise, balloons should be flown at operational height.

SIGNALLING

Night signalling should be avoided. The scheduled movements of ships during the night should be transmitted to ships present before dark. Any changes in intended evolutions should be signalled by a very dim shaded light. Strict radio silence should be maintained (including TBS).

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CRUISING DISPOSITIONS

Cruising formations of large forces should be as compact as will enable the most effective A.A. gunfire to be developed while avoiding the undue exposure of outlying ships as a target to the enemy air attack. The most dangerous period for air attack is between sunset and full dark, and for this reason ships should not be detached during this period.

In waters where enemy surface forces are likely to be encountered, the best formation for small forces is column. When the danger of attack by enemy surface vessels no longer appears likely, the formation should immediately be changed to one less vulnerable to submarine and aircraft attack; destroyers should be stationed on the bows or toward the dark horizon, depending on whether the submarine or torpedo bomber threat is considered to be the greater.

COURSE

Large formations should not maintain the same mean course for more than four hours.

If an alteration of course of more than 30° is made for more than 10 minutes, the anti-submarine screen should be adjusted to the new course change.

Ships should always zigzag, even on dark nights, using at night a zigzag plan which gives a large individual course alteration. The escort zigzag should be super-imposed on the zigzag being used by the convoy.

When aircraft torpedo attack is threatened at dusk, dawn or with a low moon, the unit should steer end-on to the source of light. Whenever tactical considerations permit, course should be laid directly AWAY from the light horizon, since this requires the attacking aircraft to pass over the screen, and gives advantages for lookout, gunfire, and avoiding action.

A/S VESSELS (Not Escorting)

A/S vessels, when not escorting, should take formation of line abreast, interval not over 400 yards, and should zigzag. Asdic transmitting watch should be maintained. Line abreast, even at high speed or in heavy weather, presents the least favorable submarine target. Vessels should not maneuver in column; it prevents use of Asdic by ships following astern, but also offers a favorable submarine target.

ATLANTIC CONVOY INSTRUCTIONS

The following excerpts from MEDITERRANEAN (W) SECRET GENERAL ORDERS are brought to the attention of Commanders of Escort vessels:

"41. C.B. 04234 - ATLANTIC CONVOY INSTRUCTIONS.

The instructions contained in C.B. 04234 are applicable in many respects to the Western Mediterranean, but there are important exceptions. Pencil notations in the sense of the following paragraphs are to be made against the Articles concerned, with a reference to this Mediterranean (W) Secret General Order

2. GENERAL SECTION.

The following Articles are applicable to the Western Mediterranean:- 14, 15, 6, 18, 19, 25, 26, 27, 35, 36 (omitting paragraph 3) 37, 38, 39, 40 (Reports to be forwarded through the appropriate Administrative authority for transmission to the Commander-in-Chief, Mediterranean), 41, 42, 44 (Note: Within the Mediterranean stragglers route is the same as the convoy route....), 45 (In accordance with paragraphs 5 to 9 to the Commander-in-Chief, Mediterranean), 46, 50, 51

3. OPERATIONS SECTION.

This section is generally applicable to Mediterranean conditions, subject to the modifications shown below.

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Major points of difference from Atlantic conditions are:-

(a) air cover in the Mediterranean is substantial and precludes U-boats from operating to any extent on the surface by day, or inadvertently by night.

In consequence the chance of shadowing or pursuit by U-boats is remote. They will, however, probably report the passage of a convoy to enable other U-boats stationed ahead to intercept.

Small independent "junks" in routes may therefore be effective.

(b) There is insufficient sea room for effective diversionary routeing. It must therefore be assumed that each convoy will pass over or near the positions of a succession of U-boats along the route.

Escorts must accordingly be stronger and disposed to give the greatest measure of protection against submerged attack, and ships cannot normally be detached for extensive retributive hunting owing to the need for maintaining an effective screen.

(c) There is a considerable danger of air attack, increasing in intensity with Easting. The greatest danger periods are dusk, dawn and moonlight. The main weight of attack is thought to come from S. SARDINIA.

Fighter convoy is sustained to the maximum extent available and daylight attacks are rare.

(d) Instructions for defence against dusk and moonlight air attack are given in Med.(W).S.G.O. 42.

4. ARTICLE 110. Normal Asdic sweeping should be carried out by day and night unless asdic conditions are very bad, or there are strong reasons to the contrary.

5. ARTICLE 112. Escorts should not be detached unless U-boat is within seven miles and never more than two escorts at a time.

6. ARTICLE 113. Shadowing by U-boats is unlikely in the Mediterranean on account of air patrols. Reporting is always possible and may bring other U-boats into the line of the Convoy, wherefore diversionary alterations are likely to be successful.

7. ARTICLE 118, paragraph 4. The hunt should be limited to two hours unless the escort is very strong. There is small risk of a U-boat overhauling the convoy after an attack, whereas there is a considerable chance of the convoy meeting another U-boat farther on.

8. ARTICLE 120. "Snowflake" illumination is unsuitable for Mediterranean conditions as these are too liable to attract patrolling aircraft or other U-boats lying in wait ahead. -

(N.B. Two white rockets denotes that a ship in convoy has been torpedoed or has sighted a U-boat.).

9. ARTICLE 130. Day Escort Diagrams should also be used by night, in place of those given in Article 131. Position 'S' is not suitable for Mediterranean conditions and should not be filled unless a very powerful escort is present.

10. Section C
10. Communications Section.

This section is generally NOT applicable to the Western Mediterranean, but Articles 310, 322, 323, and 324 should be studied as they contain much of value to escorts on this station."

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"42. DEFENCE OF CONVOYS AGAINST AIR ATTACK.

The most serious menace to convoys in the Western Mediterranean area is at present air attack, particularly air torpedo attack when delivered at dusk, dawn or in moonlight. Methods of combating this form of attack are still under examination and development; but the following instructions are issued as an interim guide.

2. Air attack, except by day, may normally be expected to develop from the direction of the dark horizon at ships silhouetted against the light. Experience to date has shown but few instances of aircraft attacking from the land background, but too much weight should not be given to this circumstance. The enemy appears to prefer a concentrated attack on one flank. A few aircraft, however, may work round to the disengaged side.

Screening Formations.

3. In general the Day Screening Diagrams laid down in A.C.1 Operations Section for A/S Screens are equally suitable for Air Defence. Positioning of ships mounting the best Anti-Aircraft armament must be carefully considered with a view to presenting the best all round defence available.

4. The running range of the torpedoes is believed to be about 4,000 yards. The object to be aimed at is therefore to develop the strongest possible barrage outside 4,000 yards from the convoy to prevent his dropping torpedoes within range.

5. Except when an Anti-Aircraft ship is present, destroyers are the strongest Anti-Aircraft ships present with the convoy. It is recommended that they be stationed as follows.

- (a) If one is present. Ahead.
- (b) If two are present. One in the wing position of the screen each side.
- (c) If three are present. One Ahead.
One in each wing.
- (d) If four are present. Either One on each bow.
One on each wing.
or One ahead, one astern,
one on each wing.
- (e) When an Anti-Aircraft ship is present she should take station between the convoy and the dark horizon, available destroyers on the screen should be disposed clear of her own best arc of fire, but so that they can augment her barrage.

6. Conditions of light, weather or other circumstances may make it plain that the attack will most probably develop from a given direction. In this case the precepts laid down in Paragraph 5(a) to (e) may be modified to meet requirements; but good reason should exist before a flank is left unguarded.

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Use of Smoke.

7. The use of smoke is still in the experimental stage. It is however known that our own torpedo aircraft have frequently been unable to attack enemy convoys when they have been effectively smoke screened. In this connection it is emphasized that it is not necessary to hide the convoy completely (though this is desirable) provided that the horizon can be obscured. The obscuration of the horizon embarrasses low flying aircraft by upsetting their judgment of height.

8. It is therefore recommended that, when wind conditions permit, the most effective possible smoke screen should be laid, using both black and white smoke. Dusk attack may be confidently expected when East of ORAN so smoke may well be laid during the dusk period in anticipation of attack.

9. Commodores should be instructed that Merchant vessels may be required to drop smoke floats to augment the screen, particularly when the wind is from astern. Smoke floats have the added advantage that they frequently mislead enemy bombers who may synchronise their attacks with the torpedo aircraft.

When the attack develops.

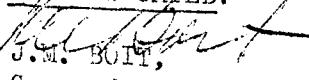
10. When an attack is seen to be developing the following tactics are recommended.

- (a) Escorts and convoy make smoke.
- (b) Escorts turn outward towards attacking aircraft, keeping arcs open.
- (c) When the escort opens fire, convoy to make an emergency turn -
 - (i) If attack is before the beam, TOWARDS.
 - (ii) If attack is abait the beam, AWAY.
- (d) New course should be maintained for 10 minutes subject to (d) below.
- (e) When aircraft reach dropping position escorts and convoy turn to comb tracks.
- (f) Resume course and station."

DISTRIBUTION:

SC's	CL's	BYMS's
PC's	AP's	Trawlers
YMS's	AK's	MMS
AM's	HDML's	Fleet Minesweepers
DD's	MLs	Large Combatant Vessels

AUTHENTICATED:


J.M. BOIT,
Commander, U.S.N.R.
Flag Secretary.

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Annex "N" to Operation Plan No. 7-43

INTELLIGENCE PLAN

- A. Information.
- B. Maps and Charts.
- C. Essential Elements of Information.
- D. Intelligence Reports.
- E. Air Warning Service.
- F. Port Security.
- G. Captured Documents.
- H. Censorship.
- I. Press Relations.

A. INFORMATION

1. Information concerning Characteristics of Theatre and Enemy Forces is contained in Annex A supplemented by -

- (a) ONI - 104 with appendices (special distribution).
- (b) ISIS 4292 A (special distribution).
- (c) Beach diagrams and sketches of principal beaches.
- (d) 1:25,000 and 1:50,000 standard maps overprinted with available information.
- (e) Coast defense battery sketches.
- (f) Index Map to coast defense batteries.

Items (c) to (f) have been furnished in sufficient quantity for wide distribution.

Spot information and routine intelligence reports are disseminated by radio.

B. MAPS AND CHARTS

1. For navigational purposes regular folios of British Admiralty and U.S. Hydrographic charts.

2. For control of naval gunfire on shore targets the following Admiralty gridded charts have been supplied Task Force Commanders for distribution. Attention is invited to the fact that H.M. Ships provided with Admiralty HG folio have these charts available in that folio.

F.645
F.650
F.646
F.651
F.652
F.653
F.654
F.655
F.839

3. Large scale chartlets of northern and southern attack force areas have been printed for use by craft and boats inshore.

4. Military maps GSGS series, 4230, 4164, 4229, 4228, have been distributed to give limited coverage of entire area and wide distribution to immediate area of assault.

C. ESSENTIAL ELEMENTS OF INFORMATION

1. Essential elements of information applicable to the tactical plans of the task force commanders will be promulgated at appropriate times. The following classes of information, applicable to all units engaged, shall be reported to this command as soon as ascertained:

C. ESSENTIAL ELEMENTS OF INFORMATION (Con't)

(a) Number, type, location, course and speed of enemy surface ships - by unit making contact.

(b) Presence and location of enemy submarines - by unit making contact.

(c) Loss or serious damage to own or enemy major craft or ships - by unit inflicting or sustaining damage, or by officer in tactical command.

(d) Beach information affecting landings and indicating conditions markedly more favorable or unfavorable than expected by commander of task group concerned. In this connection thorough preparation must be made by attack group commanders to carry out immediate reconnaissance of beach conditions at point of initial landing and adjoining areas so that the most favorable locations, considering wide variations in depths over bars and in gradients, may be utilized for rapid unloading of larger craft.

D. INTELLIGENCE REPORTS

1. Combined Situation-Intelligence reports shall be submitted daily to COMMANDER WESTERN NAVAL TASK FORCE by Commanders Task Forces 81, 85 and 88 and by Commanders Task Units 80.1, 80.2, 80.4 and 80.5.

2. These reports should be a concise but full report of situation of own forces at the time stated and should contain any information of the enemy which is not known to have been previously reported. These reports shall be numbered consecutively.

3. The above reports are additional to special progress reports or important enemy information which shall be submitted as occurring or ascertained.

E. AIR WARNING SERVICE

See Air Plan, Annex "F".

F. PORT SECURITY

1. The objectives and methods in port security are effective, insofar as applicable, to beach areas during the assault and while our forces are being maintained over the beaches. Our security object in enemy captured territory will be to prevent the conduct of our operations being prejudiced by leakage of information through espionage or other causes, by damage to our craft, equipment and communications through sabotage, or by subversive influences directed against the personnel of our forces.

2. All units are responsible for taking normal security precautions, which will be of vital importance in a hostile territory, and for taking appropriate action in all cases involving a threat to our security on the part of civilians.

3. It is of vital importance to ensure proper security measures at ports with a minimum delay after their capture. In the early stages the main object of such security precautions will be the prevention of sabotage; the next object will be to prevent leakage of information concerning our shipping and disembarkation of troops and supplies through the access of unauthorized persons to the dock areas.

(Con't)

4. It is the responsibility of each Task Force to allot the security personnel available, so that all ports used by our forces are covered by such personnel as soon as possible after their capture, and to control and supervise their work.

5. Port Security is essentially an interservice matter, in which both the Naval and Military authorities share interest and responsibility. The best method of cooperating will be evolved by experience, but the following general division of responsibility has been authorized as a guide:

(i) NAVAL RESPONSIBILITY

(a) Regulations for and control of shipping (including small craft) and of seamen and crews.

(b) Regulations for and control of entry and exit of individuals to and from port areas (jointly with Army but with special emphasis on sea approach).

(c) Counter sabotage precautions as regards ships.

(d) Regulations for and security of those parts of port area used exclusively by the Navy.

(ii) ARMY RESPONSIBILITY

(a) Regulations for and control of entry and exit to and from port areas (jointly with Navy but with special emphasis on land approach).

(b) Provision of personnel for guards in port areas.

(c) Provision and Supervision of Army Port Security
Sections.

(i) Provision, issue and control of passes and permits.

(e) Counter espionage precautions and counter espionage activities in the port as a whole.

(f) Examination and control of transients (at a possible later stage).

6. Roberts on port security matters of immediate interest or requiring action by higher authority will be made by Naval Officers in charge to or via this command.

G. CAPTURED DOCUMENTS

1. Collection. Under no circumstances should captured documents be destroyed when found. Every practicable effort will be made to search for, and collect enemy documents from captured or stranded ships, headquarters and Naval Offices on shore, signal and communication installations, living quarters, etc. These documents contain information which is vital and which, aside from helping to prevent needless loss of life, may materially affect the course of the operation. Information derived from captured documents is always of long range value to London and Washington and materially affects the intelligence picture when future operations are under consideration.

2. All documents found shall be turned over to the commanding officer of the unit without delay. Effective steps shall be taken to ensure that

G. CAPTURED DOCUMENTS (Con't)

documents valuable for the information they may reveal are not thoughtlessly retained by individuals as souvenirs.

3. Documents include the following:

- (a) Charts, maps, overlays, plans, sketches.
- (b) Directives, instructions, operation orders.
- (c) Code and Signal Books; call lists, dispatches, cipher or code work sheets, logs and records.
- (d) Files and correspondence.
- (e) Technical manuals, instruction books, newspapers and periodicals.
- (f) Miscellaneous papers of all kinds, including letters and memoranda.

No document should be rejected because it is partly burned, as attempt by the enemy to burn may be indicative of its intelligence value.

4. Captured documents shall be marked:

- (a) Unit making capture.
- (b) Date and place of capture.

5. Unit commanders shall, when practicable, extract information of immediate intelligence value and disseminate to commanders concerned. Documents not lending themselves to evaluation at unit level shall be transmitted to the next higher command without delay. Documents appearing to contain information of immediate interest to the Army or Air Forces shall be turned over to the nearest command post of those branches.

6. All Naval documents which may contain information of operational interest shall be forwarded to Main Naval Intelligence Center, Commander-in-Chief, Mediterranean, via this command, unless otherwise directed.

H. CENSORSHIP

1. Censorship regulations pertaining to private correspondence which follow relate to U.S. Forces. British censorship shall be in accordance with currently effective orders of Commander-in-Chief, Mediterranean.

2. U.S. censorship procedure will be in accordance with NAVY CENSORSHIP REGULATIONS, 1942 (as amended).

3. Only official still photographs and motion pictures will be taken in the combat area.

4. Pictures by U.S. Official Navy Photographers will be forwarded to Navy Department, Washington, D.C., for censorship and release.

5. Commanding officers of ships having facilities for developing and printing photographs on board shall forward two (2) prints of each picture taken, with complete caption, to COMMANDER WESTERN NAVAL TASK FORCE (Commander U.S. Naval Forces, Northwest African Waters) by most rapid secure transportation.

I. PRESS REPRESENTATIVES

1. Press representatives embarking for the operation will have, in addition to regular credentials, a sealed envelope addressed to the Commanding Officer of the ship to which they are allocated. All correspondents will be accredited by proper authority, and such credentials will be demanded by all units upon initial reporting.
2. Commanders will receive correspondents with the assumption that they seek to report the truth about their observations and frankness, with respect to current operations, rather than overly-guarded speech is encouraged. All proper cooperation compatible with the mission will be extended. Considerable freedom is permissible in providing facts as all copy will be censored by higher authority prior to release.
3. Press correspondents copy will be forwarded by most expeditious means but shall not be transmitted from shipboard by radio.

AUTHENTICATED:

J. M. Doit
J. M. DOIT
Commander, U.S.N.R.
Flag Secretary